

Ministry of Science, Research and Information Technology

Annual Report (Revised)

1998 | 1999

Alberta Science and Research
Authority

Alberta Science and Research
Fund

Alberta Research Council

Alberta Oil Sands Technology
and Research Authority

Alberta Heritage Foundation
for Medical Research

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I SSN 1481-3793

Public Accounts 1998-99

PREFACE

The Public Accounts of Alberta are prepared in accordance with the *Financial Administration Act* and the *Government Accountability Act*. The Public Accounts consist of the annual report of the Province of Alberta and the annual reports of each of the 18 Ministries.

The annual report of the Province of Alberta contains the consolidated financial statements of the province and a comparison of the actual performance results to desired results set out in the government's business plan, including a message from the Provincial Treasurer. The province's audited consolidated financial statements include the accounts of government entities consisting of departments (all departments combined form the General Revenue Fund, revolving funds, the Alberta Heritage Savings Trust Fund and other regulated funds, provincial agencies and Crown-controlled corporations.)

This annual report of the Ministry of Science, Research and Information Technology contains the audited consolidated financial statements of the ministry and a comparison of actual performance results to desired results set out in the ministry's business plan,

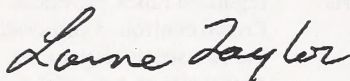
including a message from the Minister. The ministry's audited consolidated financial statements include the accounts of the Ministry of Science, Research and Information Technology, revolving funds, regulated funds, provincial agencies and Crown-controlled corporations for which the Minister is responsible. The financial statements of each of these component entities of the ministry are also included in this annual report.

This annual report includes, either as a separate report or as part of financial statements, the reports or statements prepared pursuant to the *Financial Administration Act*, to the extent that the ministry has anything to report. A summary of expenditures under each appropriation in the ministry, as required by the *Government Accountability Act*, is included in the financial statements of the ministry.

Financial information relating to the Alberta Research Council, and the Alberta Heritage Foundation for Medical Research is also included in this annual report as supplementary information.

Minister's Accountability Statement

"The Ministry's Annual Report for the year ended March 31, 1999 was prepared under my direction in accordance with the Government Accountability Act and the government's accounting policies. All of the government's policy decisions as at March 31, 1999 with material economic or fiscal implications of which I am aware have been considered in the preparation of this report."



Dr. Lorne Taylor

Minister Responsible for Science, Research, and Information Technology

September 30, 1999

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Message from the Minister

On behalf of the Government of Alberta, it is my pleasure to present the 1998-1999 Annual Report for the Ministry of Science, Research and Information Technology.

The past year has been a dynamic one thanks to a number of initiatives and activities within Alberta's research and technology communities. In addition to that, however, 1998-1999 will no doubt be remembered as an historic one, as it was a year in which the Government strengthened its commitment to innovation and science, and helped establish some strong foundations for Alberta's future.

Carpe diem – or "seize the day"

Working together over the past several years to put our fiscal house in order, Albertans are now truly in a position to seize the opportunities that are rapidly becoming available in the new global – or knowledge – economy.

While Alberta's economy is still anchored to the traditional natural resources sectors of energy, agriculture and forestry, efforts to diversify the provincial economy – particularly in the information and communication technology sector – over the past decade have been very successful. In fact, more than half of the 57,000 new jobs created in 1998 were created as a result of technological innovation.

More than any other sector, information and communication technology is creating enormous opportunities for all Albertans to take their entrepreneurial and innovative spirit across the globe.

And we have a strong head start.

As of today, Alberta has the best fibre optics and wireless communication network in Canada, the highest concentration of personal computers per capita in Canada, and according to a recent Angus Reid poll Alberta also has the highest percentage of people connected to the Internet compared to any other province in Canada.

Alberta in the knowledge economy

In his annual address to Albertans in February 1999, Premier Ralph Klein noted that in the next century, new technology and innovation will be the drivers for our economy, much as oil and gas were in this one.

To help prepare Albertans for that, in October 1998, the Alberta Science and Research Authority presented an Information and Communication Technology (ICT) Strategy for Alberta outlining a number of recommendations to build our technological infrastructure and mindset, and to make our province a magnet for new technology business and investment.

Investing in the lives of Albertans

In addition to laying groundwork to improve the ICT sector within the province, the Government of Alberta, on the advice of the Alberta Science and Research Authority (ASRA), also invested over \$16 million directly into research activities within the province.

These investments were made in 20 different research projects representing a total value of over \$90 million worth of research activity in Alberta. Reflecting the commitment ASRA is placing on Information and Communication Technology, about 55 per cent of ASRA's research funding was invested in that sector.

Other areas of research priority continue to be in the life sciences, and in particular biotechnology and research within the health sector. In December 1998, ASRA published A Health Research Strategy for Alberta outlining our focus on this sector, and plans to enhance the support currently provided to key research activities in that sector.

This past year has been a significant year for the Ministry, and for the province as science, research and technology have been given a more prominent role on the Government's agenda. This commitment was reinforced when the Government created a new Department of Innovation and Science, drawing together all of the research and technology activities and initiatives within Government.

Building on all of the work in the past few years, this move, made as part of a Government reorganization in May 1999, marks the beginning of a new era within Alberta – an era in which we celebrate our innovative spirit and our ability to adapt and capitalize on new opportunities as they present themselves.

Overall, these are exciting times for the province of Alberta. I look forward to continuing to serve in this new, expanded capacity as Minister for this exciting new department, and to playing a role in helping Albertans "seize the day" that is dawning with the new century.



Dr. Lorne Taylor

Minister Responsible for Science, Research
and Information Technology

Management's Responsibility for Reporting

The Ministry of Science, Research and Information Technology includes:

- The Alberta Science and Research Authority
- The Science and Research Fund
- The Alberta Research Council
- The Alberta Oil Sands Technology and Research Authority
- The Alberta Heritage Foundation for Medical Research

The executives of the individual entities within the ministry have the primary responsibility and accountability for the respective entities. Collectively, we ensure the ministry complies with all relevant legislation, regulations and policies.

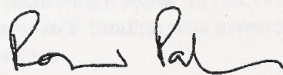
Ministry business plans, annual reports, performance results and the supporting management information are integral to the government's fiscal and business plans, annual report, quarterly reports and other financial performance reporting.

Responsibility for the integrity and objectivity of the consolidated financial statements and performance results for the ministry for the year March 31, 1999 rests with the Minister Responsible for Science, Research and Information Technology. Under the direction of the Minister, I oversee the preparation of the ministry's annual report, including consolidated financial statements and performance results. The consolidated financial statements and the performance results, of necessity, include amounts that are based on estimates and judgments. The consolidated financial statements are prepared in accordance with the government's stated accounting policies.

As Deputy Minister, in addition to program responsibilities, I establish and maintain the ministry's financial administration and reporting functions. The ministry maintains systems of financial management and internal control that give consideration to costs, benefits, and risks and that are designed to:

- provide reasonable assurance that transactions are properly authorized, executed in accordance with prescribed legislation and regulations, and properly recorded so as to maintain accountability of public money,
- provide information to manage and report on performance,
- safeguard the assets and properties of the Province under ministry administration,
- provide Executive Council, Treasury Board, the Provincial Treasurer and the Minister any information needed to fulfil their responsibilities, and
- facilitate preparation of ministry business plans and annual reports required under the *Government Accountability Act*.

In fulfilling my responsibilities for the ministry, I have relied, as necessary, on the executive of the individual entities within the ministry.



Roger Palmer
Deputy Minister
Innovation and Science

Overview

Mission

The mission of Science, Research and Information Technology (SRIT) is to enhance the contribution of Alberta's Innovation System to the sustainable prosperity and quality of life of all Albertans.

Contribution of the Innovation System

Alberta's "Innovation System" creates new ideas and applies knowledge to generate new products and services that improve the quality of Alberta's economy, communities, and environment. At the heart of the innovation system are the thousands of creative, imaginative people working in hundreds of institutions and businesses across the province. The system embodies not only research and development, but also the dissemination, commercialization, and application of knowledge and technology. Government, universities, hospitals, and private enterprises all play important roles in converting research and technology into products and services that produce socio-economic benefit for Albertans.

Specifically, SRIT's objectives are:

- To enhance the research and development (R&D) investment by all sectors of the Alberta economy.
- To cause an increase in the commercialization and application of the results of R&D in Alberta.
- To cause an increase in the effectiveness and efficiency of R&D investments by the Alberta government.

Core Businesses

The Ministry of Science, Research, and Information Technology (SRIT) carries out its mission through five core businesses:

- **Providing strategic leadership for Alberta's science and research system**

SRIT is responsible for developing policy to improve the Province's innovation system. The Alberta Science and Research Authority (ASRA) advises the Minister Responsible for Science, Research and Information Technology on policy and priorities to enhance the effective utilization of the Government's investment in science and research, and the science and research infrastructure.

- **Investing in strategically important science and research initiatives**

ASRA is responsible for the identification, development, and implementation of strategic, high-value, science and research initiatives. ASRA makes recommendations to the Minister regarding investments from the Alberta Science and Research Fund.

- **Operating elements of Alberta's R&D performing and technology transfer infrastructure**

The Alberta Research Council (ARC) is the primary performing element of the R&D infrastructure within SRIT. Responsibility for the act governing the Alberta Heritage Foundation for Medical Research (AHFMR) was transferred from the Minister of Economic Development to the Minister by Order in Council dated June 25, 1997. Responsibility for Alberta's investment in TRILabs was transferred from Alberta Economic Development to SRIT in December 1997.

- **Providing strategic leadership for information technology in Alberta**

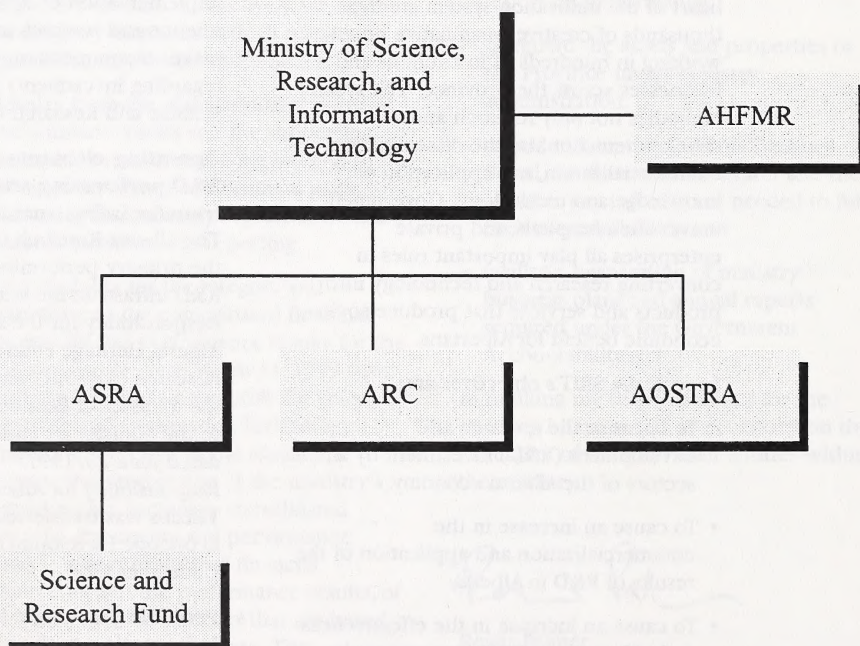
The Minister Responsible for SRIT has the mandate to represent the Province in interprovincial and national-level information-technology issues.

- **Representing Alberta in intergovernmental science and research matters.**

The Minister Responsible for SRIT has the mandate to represent the Province in interprovincial and national level science and research issues. This includes responsibility for the MOU, "The Coordination of Science and Technology Initiatives for Western Economic Development", and liaison with the Council of Science and Technology Ministers.

Entity Overview

The five core businesses of the Ministry of Science, Research and Information Technology are delivered through five entities in addition to the Minister's office. The four entities that make up the Ministry include three crown agencies: the Alberta Science and Research Authority, the Alberta Research Council and the Alberta Oil Sands Technology and Research Authority; and one legislated fund: the Alberta Science and Research Fund. The other entity, the Alberta Heritage Foundation for Medical Research is an independent agency that reports through the Minister to the Alberta Legislature.



**Ministry of Science, Research and Information Technology
(1998/1999)**

Alberta Science and Research Authority (ASRA)

The main function of ASRA is to stimulate science and research and encourage a strong economy by recommending policies and priorities for science and research that more effectively utilize the Government's investment in this area. The *Alberta Science and Research Authority Act* defined ASRA's responsibilities in 1995.

ASRA is comprised of a Board of Management of 25 members and is supported by a small secretariat. The Chairman of the Board reports directly to the Minister Responsible for Science Research and Information Technology. Under provision of the *Science and Research Authority Act*, ASRA publishes a separate annual report.

MANDATE

As the senior science and research body of the Government of Alberta, ASRA works, in collaboration with Government ministries and other stakeholders, to:

- stimulate research and development and related scientific activities in Alberta;
- develop a science and research policy and priorities that are compatible with the economic and social policies and priorities of the Government;
- conduct an annual review and evaluation of all Government science and research policies, priorities and programs;
- develop and monitor a financial management plan for the science and research investments of the Government;
- promote communication on matters related to science and research; and
- encourage the science and research community and infrastructure in Alberta to attain international excellence to enable Alberta to be internationally competitive.

OPERATIONAL OVERVIEW

The ASRA secretariat serves as support to the ASRA Board and to the Minister's office. ASRA conducts most of its work through

Board Task Forces, which undertake projects that respond to the priorities identified in the business plan. Although some task forces consist entirely of Board members, most include members of the larger community. ASRA secretariat provides project management support to board task forces and manage projects. Task forces complete their project work in three ways: 1) some work is done by the task force members themselves 2) the secretariat liaison person completes some work, and 3) in many cases private sector consultants are retained to undertake studies in support of the projects. The ASRA Board meets at about 6-week intervals to review priorities, receive progress reports from board task forces, and formulate recommendations and action plans to promote implementation of recommendations. ASRA publishes reports that summarize significant studies.

Alberta Science and Research Fund

The Science and Research Fund was enabled by the *Science and Research Authority Act* of 1995, and funded at a level of \$15 million in 1998-99. The fund was created to assist in the launch of science and research initiatives that will benefit Alberta's economy and the well being of Albertans. Funding may be provided for projects related to:

- Science and research infrastructure development,
- Enhancing the transfer of knowledge and technology from research to application and commercialization,
- High value strategic initiatives in identified research application areas,
- Building and strengthening R&D partnerships, or
- Enhancing the human resource base.

The ASRA Board evaluates applications to the fund and makes recommendations to the Minister Responsible for Science, Research, and Information Technology. The Minister has final decision authority for grants from the fund.

Alberta Research Council (ARC)

ARC is a market-driven organization employing approximately 450 highly skilled scientists, engineers technical and support staff. Last year it worked with more than 750 companies, ranging from small start-up firms to multi national corporations, as well as municipal, provincial and federal government departments and agencies.

The ARC undertakes technology development and commercialization in co-operation with the private sector. The ARC was created in 1921 and is established under the authority of the *Alberta Research Council Act*. It is comprised of an 11 member Board of Directors. A Managing Director and CEO, who reports to the Board, manages the ARC. The Chairman of the Board of Directors reports to the Minister Responsible for Science Research and Information Technology. Under provision of the *Alberta Research Council Act*, ARC publishes a separate annual report.

OPERATIONAL OVERVIEW

The Alberta Research Council (ARC) works with customers and partners to bring technology developments into commercial use for the benefit of all Albertans. ARC performs applied research and development, and provides expert advice and technical information to a diverse range of clients from small start-up firms to large multinational corporations, and government departments and agencies.

ARC provides a full spectrum of R&D and advisory services that effectively bridge the gap between basic research and market development. The corporation works closely with industry, universities and other groups in a variety of arrangements, including strategic alliances, contract research, joint ventures, consortia and licensing arrangements.

Alberta Oil Sands Technology Research Authority (AOSTRA)

On February 4, 1999, responsibility for the *Oil Sands Technology and Research Authority Act* was transferred from the Department of Energy to the SRIT as part of the ongoing realignment in government to achieve better focus and effectiveness. A newly reconstituted AOSTRA Board oversees the Act.

With this transfer of responsibility, Intellectual Property and the Alberta Oil Sands Information Service (AOSIS) was transferred to the Alberta Research Council.

OPERATIONAL OVERVIEW

AOSTRA is responsible for assisting in new technology development. It provides funds for petroleum recovery and processing from Alberta's oil sands deposits and heavy crude reserves, and enhanced recovery of oil from conventional petroleum reservoirs.

AOSTRA can best assist industry in the development of step-change technology through participation in industry consortia, such as the Canadian Oil Sands Network for Research and Development (CONRAD) and Petroleum Technology Alliance Canada (PTAC). These consortia combine the knowledge, skills and investment potential of industry players, federal and provincial governments, research providers and universities. AOSTRA works in these consortia by providing support for the organization as well as facilitating the networking potential of all participants.

Alberta Heritage Foundation for Medical Research (AHFMR)

Established as a uniquely independent foundation in 1980 under the authority of the *Alberta Heritage Foundation for Medical Research Act*, the AHFMR supports a balanced, long-term program of medical research based in Alberta. The Alberta Heritage Foundation for Medical Research

Endowment Fund was established in 1980 to finance the objectives of the Foundation—to establish a long term, balanced program of medical and health research for the benefit and health of Albertans. The initial investment was \$300 million. AHFMR is at arm's-length from government and is governed by a Board of Trustees and led by a President/Chief Executive Officer. Under the provisions of its Act, AHFMR publishes a separate annual report.

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Key Activities

Elevated Science and Technology on the Provincial Agenda

During the past year, science and research have been recognized as increasingly important elements of the Government's agenda.

- In September, the Ministry of Science Research and Information Technology, in partnership with Advanced Education and Career Development and Alberta Economic Development, was given Standing Policy Committee endorsement for "Knowledge Based Initiatives" that targeted Government investment to building human capital capacity, and research and development capability in key disciplines. This initiative is included in the 1999/2002 business plan.
- The budget approved for 1999/2000 supports an increased investment in science and research of \$15 million.
- The government has incorporated a major cross government initiative directed at Knowledge and Innovation into its 1999/2002 business plan.

Strategic Realignment of Research and Development (R&D) Infrastructure

Strategic realignment of Alberta's government R&D infrastructure was signaled by passage of *The Alberta Science, Research, and Technology Authority Act* (1998). This act consolidated the Alberta Research Council and the Alberta Science and Research Authority into a single agency thereby enabling greater strategic alignment. In February, responsibility for the *Oil Sands Technology and Research Authority Act* was transferred from the Minister of Energy to the Minister responsible for Science, Research and Information Technology. As part of this transfer, responsibility for management of AOSTRA's intellectual property portfolio was transferred to ARC.

Science and Research (S&R) Fund Investments

The Science and Research Fund made 20 separate awards with a total value of \$16,121 million primarily in enhancing Alberta's science and research capacity. Reflecting the high priorities that ASRA places on the Information and Communication Technology (ICT) sector and the life sciences (e.g. medical biotechnology, health and pharmaceutical industries), these two sectors account for 55% and 19% respectively of the investment. The total value of the projects in which ASRA has invested was in excess of \$90 million.

Information and Communication Technology Initiatives ASRA identified four areas of emphasis to build the ICT sector in its October 1998 strategy.

1. Building the human capital capacity to support the sector through investment in education and training;
2. Development of Alberta's ICT infrastructure;
3. Growing investment in ICT R&D; and
4. Growing ICT businesses.

Life Sciences Initiatives

ASRA has continued to support the health research sector in Alberta through publication of the document, "A Health Research Strategy for Alberta", in December 1998. ASRA's role in this initiative has been to support the various members of the health research community in an effort to reestablish Alberta's leadership in health research in Canada.

ASRA has played an instrumental role in launching the Alberta Biotechnology Association. This not-for-profit corporation is expected to play a key role in growing the Alberta biotechnology industry.

Investments from the Science and Research Fund have assisted in establishing key elements of research infrastructure at both the University of Alberta and the University of Calgary. These equipment and facilities will maintain the position of Alberta research groups at the leading edge of science in key fields.

Other Important Events

In October of 1998, the Alberta Heritage Foundation for Medical Research underwent a major review of its past six years of operations by an International Board of Review (IBR). This review constitutes an important element in maintaining AHFMR's position as one of the premier medical research programs in the world.

The Alberta Research Council broke ground for a new facility in Calgary.

Results Analysis

Report of the Auditor General on the Results

Ministry of Science, Research and Information Technology

Alberta Science and Research Authority

Science and Research Fund

Alberta Research Council

Alberta Oil Sands Technology and Research Authority

Alberta Heritage Foundation for Medical Research

Report of the Auditor General on the Results of Applying Specified Auditing Procedures to Key Performance Measures

To the Members of the Legislative Assembly:

I have performed the following procedures in connection with the Ministry of Science, Research and Information Technology's key measures included in the 1998-99 Annual Report of the Ministry of Science, research and Information Technology as presented on pages 18 to 43.

1. Information obtained from an independent source, such as Statistics Canada, was agreed with the information supplied by the stated source. Information provided internally was agreed to the reports from the systems used to develop the information.
2. The calculations which converted source information into reported measures were tested.
3. The appropriateness of the description of each measure's methodology was assessed.

As a result of applying the above procedures, I found no exceptions. However, these procedures do not constitute an audit of the set of key measures and therefore I express no opinion on the set of key measures included in the 1998-99 Annual Report of the Ministry of Science Research and Information Technology.

Original signed by
Peter Valentine, FCA
Auditor General

Edmonton, Alberta
August 23, 1999

Ministry of Science, Research, and Information Technology

The Ministry of Science, Research and Information Technology discharges its responsibilities through two agencies, the Alberta Science and Research Authority (ASRA) and the Alberta Research Council (ARC). Each agency was established under its own act and is managed by a Board of Directors composed largely of private citizens. The chair of each board reports to the Minister Responsible for Science, Research and Information Technology.

Alberta Science and Research Authority

During 1998/1999, ASRA has pursued eight strategies that collectively are designed to implement the Authority's mandate and core business for science and research. ASRA pursues these strategies through a series of task forces commissioned by the Board to develop and promote recommendations that advance science and research in Alberta.

Alberta Innovation Strategy

- *Promote implementation of "Sustaining the Alberta Advantage: Investing in Knowledge, Our Most Important Renewable Resource".*

This overarching strategy encompassed nearly all activities and initiatives undertaken by ASRA during the reporting period. Most of the discussion in this section contributes to this strategy.

ACTIVITIES

Knowledge and Innovation Initiative started in partnership with Advanced Education and Career Development and Economic Development to target government investment to build human capital capacity and research and development capability in key disciplines. (September, 1998)

Release of Information and Communications Technology: A Strategy for Alberta. (October 1998)

Government realigned its research and development infrastructure with the proclamation of the *Alberta Science, Research and Technology Authority Act*. In April 1999, the new *Alberta Science, Research and Technology Authority Act* came into force, broadening the range of activities of the Authority to include the governance of the Alberta Research Council.

OUTCOMES

Cross-government initiative, "Knowledge and Innovation", started among departments. Through this initiative a government-wide innovation policy will be developed.

Increased financial support to Strategic Science and Research Initiatives in the 1999/2002 budget from \$16.5 million to \$31.5 million.

Information Technology Strategy

- *Develop a strategic plan for development of the information technology sector.*

OUTPUTS

The discussion document Information and Communications Technology: A Strategy for Alberta was released by ASRA in October 1998. A forum was set up on the ASRA web site to allow the public to provide their opinions/comments on the report.

Tax and Regulatory Environment Strategy

- *Continue to work with Treasury to develop and implement practicable tax measures that enhance the competitiveness of Alberta's high-knowledge industries.*

ACTIVITIES

Ministry staff worked closely with representatives of Alberta's film industry to develop a proposal for an integrated package of tax measures to support the high-knowledge industries.

OUTCOMES

The Minister and the Provincial Treasurer proposed a package of tax measures to support Alberta's Knowledge Based Industries. The Standing Policy Committee concluded that these industries required assistance to maintain Alberta's competitiveness, but declined to support the proposed tax package. This initiative ultimately led to grant programs to support the film industry and the Knowledge-Based Industries, as discussed elsewhere in this report.

- *Pursue the implementation of the recommendations of the "Barriers to Technology Commercialization in Alberta" report.*

ACTIVITIES

ASRA initiated a study to develop specific recommendations for improving the effectiveness of Alberta's technology commercialization infrastructure. The final report is expected in 1999/2000.

Sector-Specific Research and Development (R&D) Strategy

- *Ensure that sector-specific plans to increase industry funding for R&D in key sectors are developed and implemented.*

ACTIVITIES

ASRA worked with key stakeholders in each sector to encourage and facilitate development of sector specific research plans.

Forestry industry

In a coordination role, ASRA is working with key industry, government, and university stakeholders in the forestry sector to develop a strategy for forestry research.

Climate change technology

ASRA staff were key contributors in the joint industry, government, and university stakeholder process that created Alberta's technology strategy for Greenhouse Gas (GHG) Emissions Management.

Pharmaceutical sector

ASRA is developing a pharmaceutical research and development strategy through a consultation process. The Minister and ASRA staff have met with numerous representatives from the pharmaceutical sector including members of the Canadian Research Based Pharmaceutical Companies (formerly the Pharmaceutical Manufacturers Association of Canada).

OUTPUTS

Climate change technology

The government committed to forming partnerships with Albertans to develop and implement its Climate Change Action Plan. Through one such collaborative effort, the proposed Alberta Technology Strategy for the Management of Greenhouse Gas Emissions has been developed. The proposed Technology Strategy has two main objectives:

- To ensure the effective deployment of technologies within Alberta to mitigate greenhouse gas emissions, and
- To capitalize on global opportunities for exporting climate-friendly technology solutions developed and adapted in Alberta.

The Strategy proposes the establishment of an Alberta Centre for Climate Change Technology as a mechanism to focus the energies of all stakeholders. A board representing stakeholders from industry, government, and universities would direct the activities of the Centre in three program areas:

- A technology intelligence program to ensure that Alberta benefits from the more than \$100 billion of research and technology development activity that occurs each year on a worldwide basis
- A research program to focus on adaptation and application of technologies that respond to Alberta's situation, and
- A policy directorate to link the technology programs to the economic and social constraints and to assess and

recommend on government policies to facilitate effective implementation of solutions.

- *Continue to promote the development of an Alberta biotechnology industry association and encourage the development of a biotechnology industry.*

OUTPUTS

S&R fund supported five initiatives in support of development of the biotechnology sector within Alberta for a total investment value of \$3,215,000.

ASRA and Economic Development, with the Interdepartmental Biotechnology Committee, developed the draft strategy: Biotech 2020: A Vision for the Alberta Biotechnology Industry.

- *Continue to encourage the coordination of health research in Alberta.*

ACTIVITIES

The Health Research Strategy Advisory Group (HRSAG), which was established during 1997 to provide a coordinated approach to, and to advise Government on, strategic issues related to health research in the province. The scope of health research considered by the Advisory Group includes:

- biomedical,
- clinical, and
- health systems (including population health and health informatics research).

In 1997, HRSAG directed a working committee, consisting of representatives from the organizations represented by HRSAG, to develop a draft health research strategy for their review and approval. The working group presented this draft strategy to HRSAG in December 1998.

OUTPUTS

The HRSAG released the draft document, A Health Research Strategy for Alberta: From the laboratory to the community - using research to improve the health and

prosperity of Albertans to the health research community in December 1998. Feedback still is being received.

Alberta Government Science and Research Strategy

- *Review the R&D plans of government ministries annually and recommend improvements to the provincial R&D programs.*

ACTIVITIES

Conducted a more strategic review by engaging departments at the beginning of the planning period - May/June, rather than in September/October.

- *Publish the R&D plan for Alberta annually based on Ministry R&D plans.*

ACTIVITIES

Prepared a report summarizing R&D plans and distributed to ASRA Board as information to assist with the review process for research done in 1998/1999.

- *Publish the Research Overview, an annual report on provincial government R&D activities and results.*

ACTIVITIES

Prepared a report summarizing government research in 1997/98 and distributed to ASRA Board as part of the information package for Board review.

Promote Research Excellence Strategy

- *Develop practical recommendations to promote research excellence in Alberta's universities in consultation and cooperation with Advanced Education and Career Development.*

ACTIVITIES

ASRA participated on the review team for the Intellectual Infrastructure Partnership Program (IIPP), which invested in universities' research infrastructure. The objective of the IIPP is to fund enhancements in the research

infrastructure in Alberta universities and research hospitals to facilitate research excellence.

IIPP is a complimentary initiative to the federal Canadian Foundation for Innovation (CFI). The CFI is an independent corporation established by the federal government to strengthen Canadian capability for research. The CFI's mandate is to increase the capability of Canadian universities, colleges, hospitals, and other not-for-profit institutions to carry out important world-class scientific research and technology development.

- *Recommend investments from the Science and Research Fund.*

See Alberta Science and Research Fund section in report.

Performance Measurement Strategy

- *Maintain and improve the performance measurement framework for science and research in Alberta.*

ACTIVITIES

Development of SRIT Performance Management Framework

ASRA staff has continued to evolve the SRIT Performance Management Framework. A paper on this system was presented to the Conference Board of Canada's Network on R&D Impacts in November 1998. ASRA anticipates publication of an ASRA report on this system in 1999/2000. The draft framework identifies the following elements.

The performance measurement framework for evaluating SRIT's effectiveness in achieving its mission involves assessment of the IMPACTS over time of OUTCOMES that result from the OUTPUTS of SRIT's activities.

- **OUTPUTS** - are the products of activities, the reports and communications that result from projects, consultations, and other initiatives.

- **OUTCOMES** - are individual or group behavior changes that are caused by SRIT's OUTPUTS. SRIT's OUTCOMES are assessed by the degree to which they are instrumental in altering the behavior of key actors in the innovation system in desired ways. To be effective, SRIT seeks to direct its OUTPUTS at multiple actors within the system.
- **IMPACTS** - are the changes in the system that result over time from the OUTCOMES produced by SRIT. IMPACTS assess the degree to which the strategies and strategic objectives are accomplished. IMPACTS generally result from changes in multiple elements in the complex innovation system.

SRIT's contribution toward achieving these outcomes and impacts on a year to year basis consists of a variety of projects and programs. The intermediate outcomes of these initiatives are commonly best assessed in non-quantitative, anecdotal terms. In this 'Results Analysis' section, outputs and outcomes of each of the strategies are described in these terms.

Revision of Government Business Plan - Measuring Up

A working group of TRAC (Technology and Research Advisory Committee) led by Ministry staff worked with the performance measures group of Alberta Treasury to revise the innovation goal in the Government Business Plan.

OUTCOMES

Treasury Board has approved the revision, which is reflected in Measuring Up 99, published July, 1999.

- *Work with Advanced Education and Career Development to develop appropriate measures for Human Capital Capacity.*

ACTIVITIES

Development of the Knowledge-Based Initiatives and the cross government initiative, Knowledge and Innovation, took precedence over this initiative, which remains on hold.

- *Publish the Annual Report on the Performance of Alberta's Innovation System Activities*

ACTIVITIES

The Performance of Alberta's Innovation System initiative was integrated within the SRIT Performance Management Framework. ASRA has compiled data on Innovation System Performance, but has not published a report. We intend to make these data routinely available on the ASRA web site, but have not yet determined how best to accomplish this. The most current data is presented as an attachment to this section of the Annual Report.

Performance Measures and Targets

Operational Performance Measure: ASRA will complete and publish the following reports during the planning period:

Report	1998/1999	Publication Date
Strategy for the Information Technology Sector	X	Published report: Information and Communications Technology: A Strategy for Alberta. Released October, 1998
Alberta Government R & D Plan	X	Report distributed to ASRA Board April 20, 1999 Meeting, Edmonton
Alberta Research Overview	X	Report distributed to ASRA Board April 20, 1999 Meeting, Edmonton
Annual Report on the Performance of the Alberta Innovation System	X	See next page

Performance of the Alberta Innovation System

Macro-Level Impact Measurement

As previously outlined, the mission of SRIT is to enhance the contribution of Alberta's Innovation System to the sustainable prosperity and quality of life of all Albertans. In the long term, the performance of the "Innovation-Based Economy" *serves as the most effective measure of SRIT's IMPACT in the Alberta economy. In its 1997 report, "Sustaining the Alberta Advantage: Investing in Knowledge, our Most Important Renewable Resource," ASRA defined the Innovation-Based Economy to include the following sectors.

Resource Value-Added	Energy Value-Added	High Knowledge Manufacturing
<ul style="list-style-type: none"> • Food and Beverage Products • Wood Products • Paper and Allied Products 	<ul style="list-style-type: none"> • Plastics and Rubber Products • Chemical and Chemical Products • Refined Petroleum and Coal 	<ul style="list-style-type: none"> • Machinery • Transportation Equipment • Electrical and Electronic Products • Other Manufacturing

THE PERCENTAGE OF GDP DERIVED FROM THE INNOVATION-BASED ECONOMY

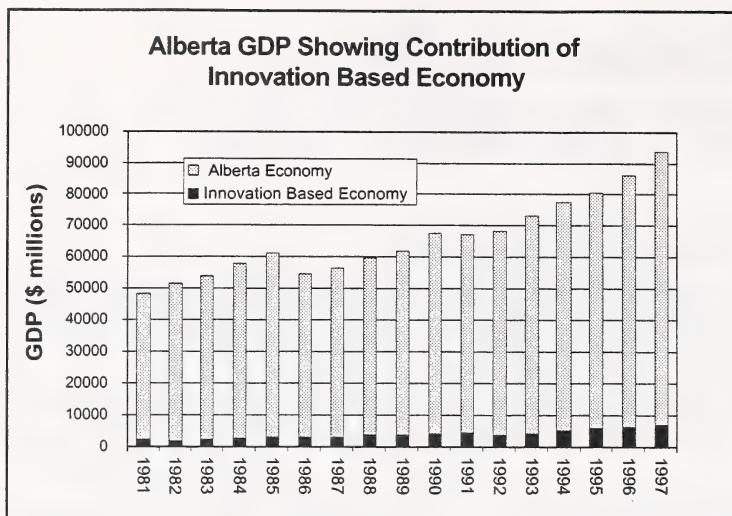
The tables and graph below summarize the growth of the Innovation Based Economy as well as the Alberta economy as a whole.

	1981	1992	1997
Alberta GDP	48,258	68,458	93,696
Innovation-Based Economy GDP	2,126	3,754	7,048
% Innovation-Based Economy	4.4%	5.5%	7.5%

Size of the Alberta Economy and Innovation-Based Sector (GDP in \$ millions).

DATA SOURCE: The data are derived from Table 10 in the report, *Alberta Economic Accounts - 1997, 1998, Alberta Treasury*.

* We have used the term, "Innovation-Based Economy", for those sectors of the Alberta economy where people, knowledge, and research are the primary drivers. The innovation-based economy consists of the "high-knowledge" manufacturing sector combined with "resource value added" and "energy value added" industries.



Graph of Alberta GDP showing the component derived from the Innovation-Based Economy.

DATA SOURCE: The data are derived from Table 10 in the report, *Alberta Economic Accounts - 1997, 1998, Alberta Treasury*.

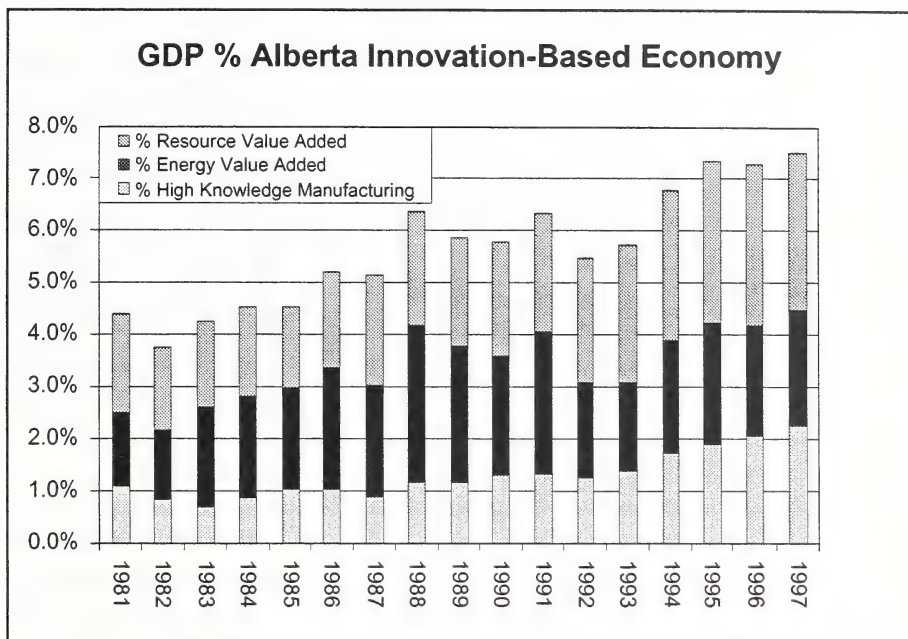
The contribution of the Innovation-Based Economy to Alberta's GDP grew at an average rate of 7.3% per year between 1981 and 1997. The rate of economic growth has nearly doubled since 1992, to an average rate of 13.4% per year. This sector has grown about twice as fast as the Alberta economy as a whole, which has averaged 4.0% and 6.5% per year since 1981 and 1992, respectively.

	1981-1997	1992-1997
Alberta GDP	4.0%	6.5%
Innovation-Based Economy GDP	7.3%	13.4%

Average annual growth rate of GDP in Alberta Economy and Innovation-Based Sector

DATA SOURCE: The data are derived from Table 10 in the report, *Alberta Economic Accounts - 1997, 1998, Alberta Treasury*.

The fastest growing component of the Innovation-Based Economy has been high knowledge manufacturing, which has grown at an average rate of 19.6% per year. Resource Value-Added and Energy Value-Added manufacturing have grown more slowly, averaging 11.8% and 10.6% per year respectively.



Graph showing GDP percent of the three components of the
Alberta Innovation-Based Economy

DATA SOURCE: The data are derived from Table 10 in the report, *Alberta Economic Accounts - 1997, 1998, Alberta Treasury*.

Determinants of Growth of the Innovation-Based Economy

Three measures provide an indication of "behaviors" within the Alberta economy that are expected to produce increased performance in the Innovation-Based Economy. Each of these measures addresses a key component of system performance that contributes to achieving the overall goal of growth in the Innovation-Based Economy.

1. Level of innovative activity by Alberta businesses:

To remain competitive on a global basis over the long term, Alberta businesses need to cultivate a culture of continuous innovation. This involves both (1) the creation of new knowledge/technology internally through investment in research and development, and (2) the adoption of new technologies developed elsewhere.

Research can provide businesses with the knowledge/ability to improve their current products/business, develop new products, and enter new markets. Research can also provide firms with a competitive edge, enabling them to lower production costs or command higher prices for their products, which reflects both an increasing number of research-intensive companies and an increase in R&D by existing businesses.

Adoption of new technologies can provide firms with a competitive advantage through new product introductions or improved cost-efficiency of operations.

2. Human Capital Capacity:

The proportion of the highly qualified personnel in the labor force provides an index of Human Capital Capacity. Each of the three indices of Human Capital Capacity reflects the abundance of the types of skilled knowledge workers, who constitute the fundamental resource of the Innovation-Based Economy.

3. Investment in start-up and early stage companies in the innovation-based economy:

Start-up and early-stage businesses in the innovation-based economy are commonly financed through venture-capital or risk-capital investment. The amount of this form of investment placed and managed in Alberta provides an index of the growth potential in the Innovation-Based Economy.

INNOVATIVE ACTIVITY BY BUSINESSES

Business Expenditure on R&D

Data on Business Expenditure on R&D (BERD) are not presented here because of the lack of current data. BERD and its companion measure, Gross Expenditure on R&D (GERD) are used as the standard, international comparisons of the size of a jurisdiction's R&D establishment. Unfortunately, at the provincial level, these measures can be used only in an historical context, because of the lag in publication. We are continuing to work with Statistics Canada in an effort to improve the timeliness of these measures.

Adoption of new production technologies and introduction of new products

We are currently working with Statistics Canada to develop new measures that track the adoption of new production technologies and the introduction of new products by Alberta firms.

HUMAN CAPITAL CAPACITY

Lee and Has of Industry Canada* identified three measures of human capital in their study of "High-Knowledge Industries."

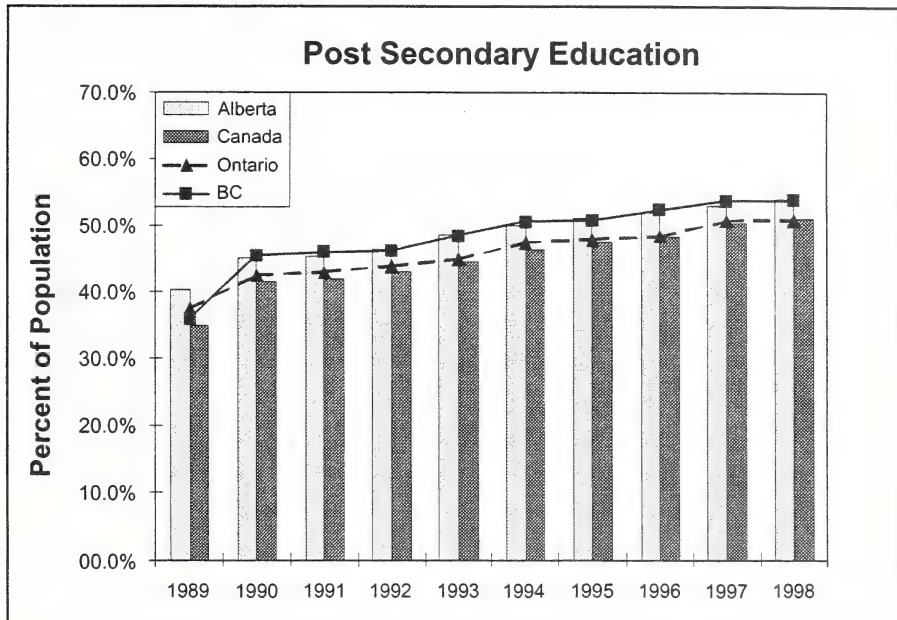
1. Ratio of workers with post-secondary education to total employment
2. Ratio of knowledge workers to total employment
3. Ratio of employed scientists and engineers to total employment

We have used these three categories as indices of the human capital capacity of the provincial economy.

Post-Secondary Education

The success of jurisdictions in the emerging Innovation-Based Economy depends to a very great degree on having a highly-educated labour force. The percent of the Canadian population with a post-secondary education has increased steadily through the past decade. During the past decade, leadership in percentage of population with post-secondary education has fluctuated between Alberta and British Columbia.

* Frank C. Lee and Handan Has, 1996, *a quantitative assessment of high-knowledge industries versus low knowledge-industries*, p. 39-81 in *The Implications of Knowledge-Based Growth for Micro-Economic Policies*, Peter Howitt, ed., University of Calgary Press



The data are derived from Statistics Canada, 1999, Labour force historical review: Catalogue No. 71F0004XCB (CD-ROM).

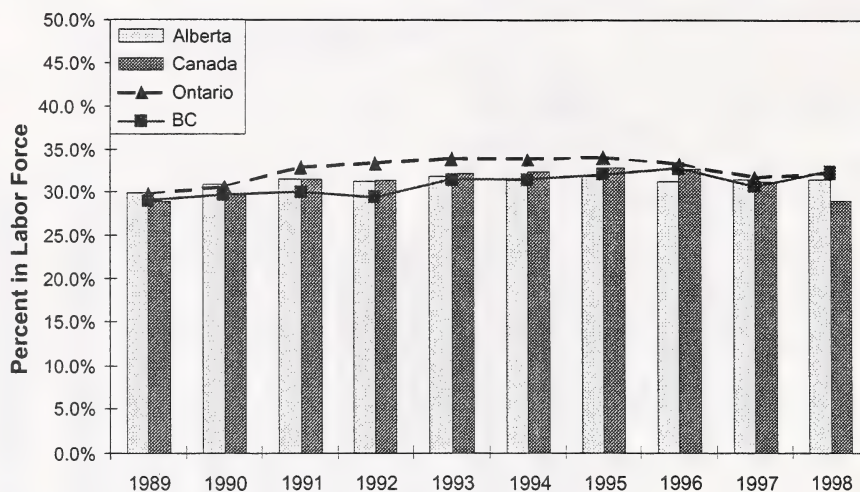
Knowledge Workers

Knowledge workers are defined to include the following categories in the 1998 Labor Force Survey:

- Professional Occupations in Business and Finance
- Occupations in Social Science, Government Service and Religion
- Natural and Applied Sciences and Related Occupations
- Occupations in Art, Culture, Recreation and Sport
- Professional Occupations in Health, Nurse Supervisors and Registered Nurses
- Management Occupations
- Teachers and Professors

The percentage of the labour force made up of knowledge workers is an important index of the emergence of the Innovation-Based Economy. During the past decade, leadership in percentage of knowledge workers in the labour force has fluctuated between Alberta, Ontario, and most recently British Columbia.

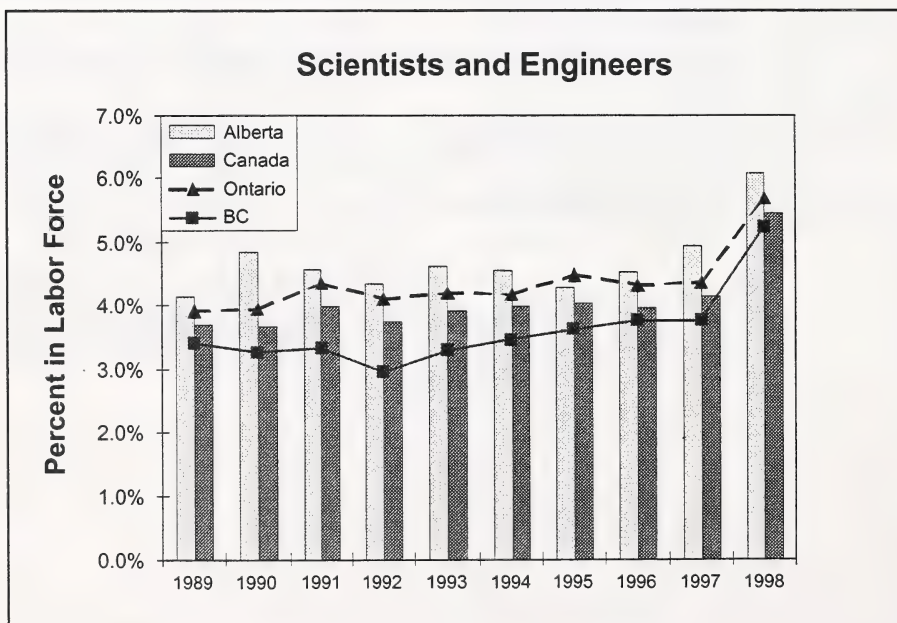
Knowledge Workers



The data are derived from Statistics Canada, 1999, Labour force historical review: Catalogue No. 71F0004XCB (CD-ROM).

Scientists and Engineers

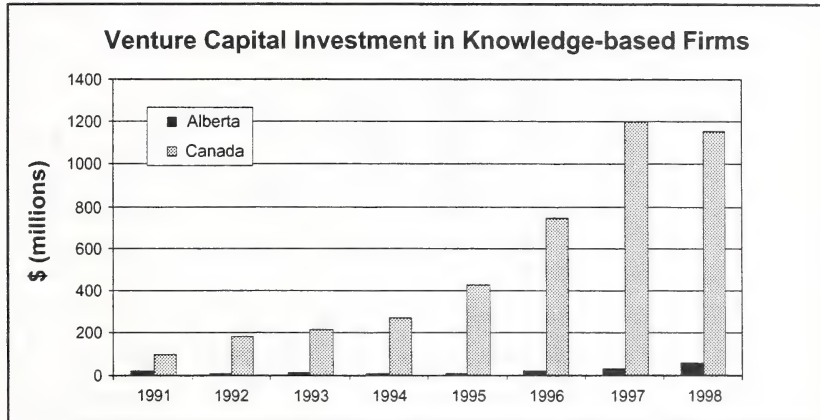
Scientists and engineers play a critical role in the Innovation-Based Economy as creators and implementers of the new ideas that result in new processes and new products. Scientists and engineers constitute a larger proportion of the labour force in Alberta than in any other province within Canada.



The data are derived from Statistics Canada, 1999, Labour force historical review: Catalogue No. 71F0004XCB (CD-ROM).

INVESTMENT IN START-UP AND EARLY STAGE COMPANIES

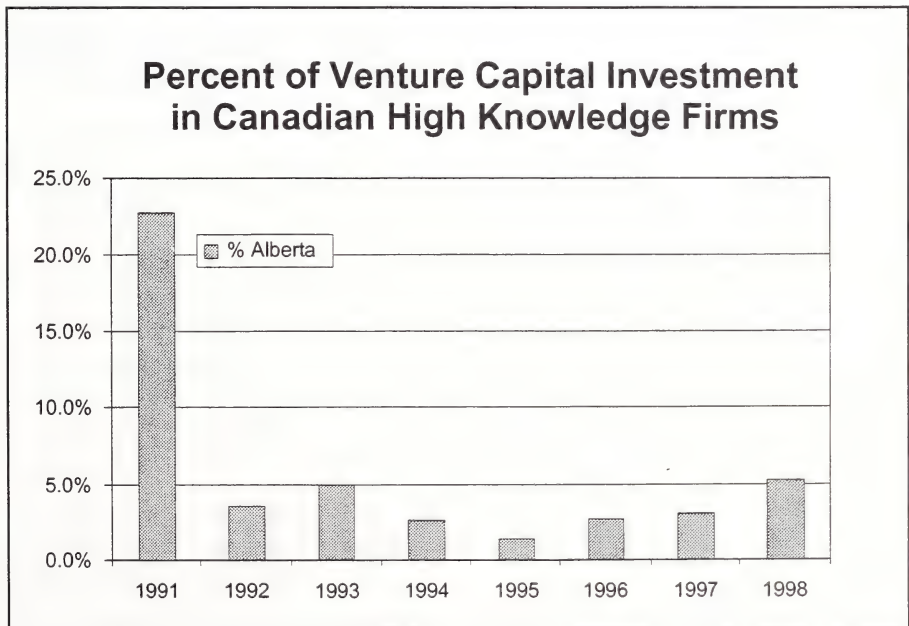
Start-up and early-stage businesses in the Innovation-Based Economy are commonly financed through venture-capital or risk-capital investment. The amount of this form of investment placed and managed in Alberta provides an index of the growth potential in the Innovation-Based Economy. The level of risk capital investment is taken as an index of the level of financing available to support emergence and growth of new, early stage companies in the Innovation-Based Economy.



Venture Capital Investment in Knowledge-Based Firms in Alberta and Canada

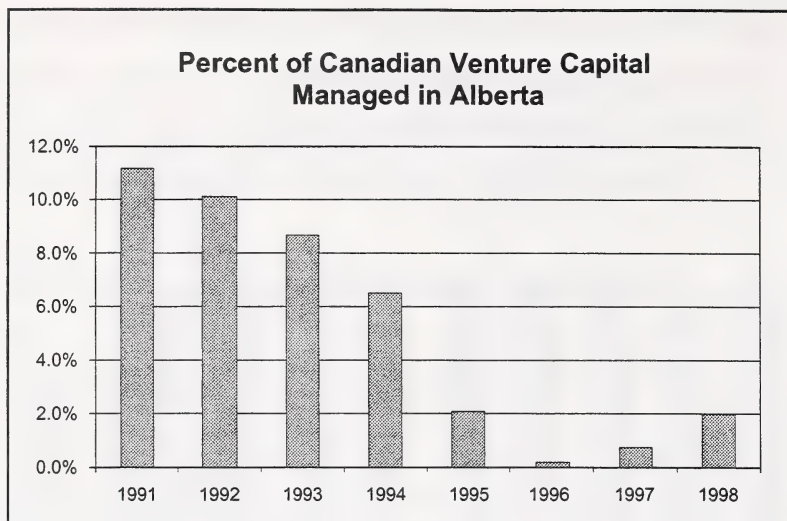
DATA SOURCE: The data were provided by Macdonald & Associates, Toronto, 1999.

Although the amount of risk capital invested in firms in the Innovation-Based Economy in Alberta continues to grow, less than 5% of the total investment of these funds in Canada is occurring in Alberta.



Percent of Canadian Venture Capital Investment in Knowledge-Based Firms that was invested in Alberta

DATA SOURCE: The data were provided by Macdonald & Associates, Toronto, 1999.



Percent of Venture Capital under management in Canada that was managed in Alberta

DATA SOURCE: *The data were provided by Macdonald & Associates, Toronto, 1999.*

Although about 5% of the risk capital invested in the Innovation-Based Economy is placed in Alberta firms, only about 2% of the risk capital in Canada is managed in Alberta.

SRIT Performance Assessment

SRIT's OUTCOMES and IMPACTS can be evaluated only over the long-term.

The macro-level impacts and outcomes discussed in the previous sections reflect the long-term, aggregate influence of a myriad of initiatives and activities. SRIT's contribution toward achieving these outcomes and impacts on a year to year basis consists of a variety of projects and programs. The intermediate outcomes of these initiatives are commonly best assessed in non-quantitative, anecdotal terms. In this section, the discussion of each of the strategies includes the outputs and outcomes of these initiatives.

Public Awareness and Support for Science and Research Strategy

- Facilitate the science promotion efforts of public and private organizations that enhance the science and innovation culture in Alberta.

ACTIVITIES

Communication activities were organized to promote science and research in Alberta. The following media events were planned to promote and enhance science efforts in the community:

Media Releases and Events

News Releases

- National Space Day Highlights Alberta Achievements in Space Technology (October 16, 1998)
- Alberta Poised for Growth in Global Information and Communications Technology Sector (November 12, 1998)
- AOSTRA Aligned with Science, Research and Information Technology (February 4, 1999)
- Minister heads to hometown classroom for feedback on new learning resources (March 26, 1999)

Joint News Releases

- New facility to aid in developing faster, less expensive drugs (June 5, 1998) University of Alberta
- U of A announces \$2.2 million chair in thin film engineering research (June 10, 1998) University of Alberta
- Government invests \$19.8 million in research projects at universities (November 23, 1998) Advanced Education and Career Development (AECD)
- Government of Alberta, Nortel Networks and SAIT Create Global Communications Centre (November 26, 1998)
- U of C opens new facility for contagious diseases research (January 15, 1999) University of Calgary, Faculty of Medicine

- New Incubator Hi-Tech Building Planned for Calgary (January 26, 1999) Calgary Research and Development Authority
- Province expands high-tech diploma and degree programs (February 9, 1999) AECD

Advertisements

- About general science and technology, National Science and Technology Week, and biotechnology (placed in the Edmonton Journal, Calgary Herald, Alberta Venture, and Globe and Mail)

Publications

- Alberta Science and Research Fund – Guide to Applicants and Information Pamphlet (April 1998)
- Alberta: The Spirit of Innovation (October 1998)
- Sustaining the Alberta Advantage through Science and Research...1997/98 Accomplishments of the Alberta Science and Research Authority (October 1998)
- Information and Communications Technology: A Strategy for Alberta (October 1998)
- A Strategy for Information and Communications Technologies – CD-ROM (November 1999)
- Alberta Science and Research Authority – Pamphlet (February 1999)
- Monthly submissions on ASRA (April 1998 – March 1999 inclusive)

Other Activities

ASRA assisted in organizing Ministerial speaking engagements and was a sponsor and participant in three major events that enhanced the science efforts in the community:

- Technology for Success '98—October 20, 1998, Edmonton
- ASTech Awards Gala—October 23, 1998, Edmonton
- InfoCity Festival '99, Technology Exposed—March 19 – 20, 1999, Edmonton

Alberta Science and Research Fund

Strategy 1 Encourage the development and implementation of new high-value strategic science and research opportunities.

This strategy, which links to "Promote Research Excellence" in the ASRA discussion, was pursued through implementation of the Alberta Science and Research Fund, which received funding of \$16.5 million during 1998/99.

ACTIVITIES

ASRA adopted a proposal evaluation system based on the ProGrid methodology. A new application process using this methodology will be implemented in 1999/2000.

During the reporting period ASRA evaluated 51 proposals of which 20 were funded. The table below summarizes investment activity by the fund.

	1997-98	1998-99
Proposals Reviewed	8	51
Proposals Funded	5	20
Fund Investment (\$ '000)	3,344	16,122
Private Sector Investment (\$ '000)	2,570	31,201
Total Project Investment (\$ '000)	16,707	90,512

1998-99 Investments from the Science and Research Fund

Initiative	Total Projects Funded	Total Spent in each Sector	Percentage of Investment
ICT	5	8,883	55%
Life Sciences	5	3,115	19%
Transportation	1	600	4%
Resource Sector	4	881	5%
Science Culture	2	242	2%
Research	2	900	6%
Commercialization	1	1,500	9%

OUTCOMES

Nearly all of the investments made during 1998/99 were made at or near the end of the year. As a result, very little work was completed on any of these initiatives. Some of the investments made in 1997/98 began operating during 1998/99 and are reporting results.

Advanced Bio NMR - This grant was made conditional on the receipt of a CFI grant. The CFI process was significantly delayed resulting in an award only at the end of 1998/99. No progress on this initiative occurred during the year.

National High-Field NMR Facility - Construction of the building to house the instrumentation was nearly complete, with researchers beginning to move in on March 31, 1999. Equipment was scheduled for installation beginning April 1999.

Level 3 Containment Facility - The facility was commissioned in January 1999 and training of staff begun.

Three of the initiatives in which ASRA invested were operational during 1998/99, TRILabs, PIMS, and Wurcnet. The table below summarizes the performance in terms of "return on investment" of these initiatives.

	1997/98	1998/99
Workshops & Short Courses		8
Technology Disclosures	40	56
Patents Filed	11	13
Researchers	19	22
Students in Training	38	41
Post-doctoral Fellows		4
Graduates	11	11

Alberta Research Council (ARC)

ARC's mission, "In partnership with global leaders, ARC helps to advance the economy and well-being of Alberta by providing technology and innovation to meet current and emerging needs of industry and government," was advanced by six strategies.

Strategy 1 Develop ARC's intellectual capital

ARC continued to invest in its intellectual capital to increase effectiveness. During the year, the corporation developed metrics to measure its Intellectual Capital, the most important of these being Human Capital.

ACTIVITIES

ARC continued a strategic hiring program to enhance core competencies, develop new capabilities, and expand business development and entrepreneurial expertise. ARC made seven strategic hires in addition to the 11 that were brought on staff in the prior year.

ARC developed corporate training and development programs for professional and management staff. The first course, Strategic Management, was offered to all managers in May/June 1998. A Project Management course was developed in-house and presented in March 1999.

In 1998/99, employees submitted 33 new invention disclosures to our Intellectual

Property Office. We submitted 32 patent applications to various international and national jurisdictions. Three new patents were approved in Canada, 15 in the United States and three in other countries. Of these patents, five are unique, or "first of family".

ARC generated \$759,000 in licensing and royalty revenue in 1998/99. This came from 16 organizations, with five of those generating \$50,000 or more each. Our goal is to increase commercialization revenue to 10 per cent of our annual budget, or approximately \$10 million by the year 2005.

ARC has established an Investment Fund to: (1) seed early stage ideas brought forward by employees to determine their technical and market feasibility; (2) advance an idea further along the value chain to the point where an external partner can be interested; (3) joint venture with one or more external partners; and (4) acquire technology from external sources to bundle or add value to technology that has been developed in-house.

In 1998/99, we invested approximately \$6.5 million in 131 projects. Investments are stage-gated to manage the risks with the level of investment required.

OUTCOMES

Element of Intellectual capital	Measure	1997/98	1998/99	Target from 1998/99 Business plan
Human Capital	Employee Satisfaction	66.9%	67.9%	~ 90% in 2005
Customer Capital	Customer Satisfaction	95.7%	96.6%	98%+ in 2005
Intellectual Assets	Number of patents and disclosures	112 patents 20 new disclosures	21 new patents (five "First in Family") 33 new disclosures	Undefined
	Licensing and Revenue income	\$724,000	\$759,000	\$10M in 2005

Strategy 2
Enhance ARC's market focus

ACTIVITIES

The Technology Commercialization Office was instrumental in licensing-out nine technologies. We also licensed-in one external technology for further development and ultimate commercialization through an industrial partner.

Eight technology platforms approved during the year will form the basis for a targeted and diversified investment portfolio. Commercialization strategies are being developed for each platform, ranging from licensing the technology through to joint venture partnerships.

An increasing emphasis is being placed on nurturing high potential platforms in-house to the point they can be spun-out as stand-alone commercial enterprises. Three new strategic initiatives were also approved, which are expected to lead to new technology platforms in the future.

OUTPUTS

ARC developed a new strategic plan to focus the business for improved impact and results. It aligns business activities around technology platforms in two primary areas: (1) R&D contract services and (2) technology development and commercialization.


Strategy 3
Increase private-sector investments

ARC performs applied research and development on contract for private-sector companies and government. We concentrate on areas where we have proven expertise and can make the biggest economic impact through technological innovation.

ACTIVITIES

ARC worked with 750 customers and partners during the last fiscal year. R&D contract services for the private sector and other external customers totalled \$25.5 million - \$1.7 million higher than the previous year. ARC also received \$759,000 in royalties and licensing fees. ARC's net revenue (after expenditures) was \$757,000 which was \$371,000 higher than budget.

IMPACTS

ARC: Business Goals, Performance Measures and Targets								
BUSINESS GOALS	1996/1997 Actual	1997/1998 Actual	1998/1999 Actual	1999/2000 Projection	2000/2001 Projection	2001/2002 Projection		2006/2007 Target
Economic Impact (\$M)	117	134	140*	150	160	170		250
Job Creation (direct jobs)	732	782	800*	850	900	950		1200
Private Sector R&D R&D Funding (\$M)	18.7	18.0	17.9	22.7	25.5	33.1		47.9
Gov't Investment (\$M)	22.7	23.5	25.4	26.5	26.5	27.6		27.6
Royalty and Licensing Revenue (\$M)	1.5	0.7	0.8	0.8	1.1	1.4		11.4
Ratio of Private Sector R&D Funding \$/ Gov't Investment \$	0.82	0.77	0.71	.86	.96	1.20		1.74
Total Contract Revenue (Private sector + Gov't contracts) (\$M)	21.8	23.8	25.5	36.9	38.5	41.1		55.7
Mission Effectiveness (Econ. Impact/ Gov't Inv.)	5.1	5.7	5.5	6.6	7.0	6.2		
Customer Satisfaction	95.5%	95.7%	96.6%					98%+
Employee Satisfaction	66.9%	66.9%	67.8%					90%+

*It is estimated that over \$10 million of provincial corporate and personal income tax revenue is derived from ARC's partners and clients in 1997/1998. Numbers in italics (1998/1999 Economic Impact and Job Creation) are estimates because reliable data was not available at the time of printing.

Strategy 4 **Develop innovative strategic alliances**

ARC develops strong alliances with potential sources, developers and end users of technology, as well as other key players in industry, government and the global research community.

ACTIVITIES

During 1998/99, ARC entered into an alliance with AVAC Ltd. of Calgary. AVAC provides financial investment and collaborative support to companies and research organizations seeking to develop products and services with demonstrable commercial potential in the value-added food and fibre agribusiness sector.

ARC also uses alliances and partners to enter new markets. One example is an alliance negotiated in 1998 with the Singapore Productivity and Standards Board (PSB). ARC and the PSB have established a for-profit joint venture, Technology Commercialization Company (TC2), in Singapore to commercialize technologies through new spin-off ventures in partnership with private entrepreneurial champions.

Strategy 5 **Build on efficiencies and effectiveness gained**

ARC continually strives to enhance its performance and generate efficiencies for ever greater effectiveness.

ACTIVITIES

During 1998/99, ARC implemented a new technology evaluation and due diligence process to more rigorously evaluate technology investment and commercialization opportunities. This includes the adoption of Pro-Grid as a screening tool to help identify potential barriers to successfully taking a new product or process into the marketplace.

ARC revised its budget and planning process to support its new business strategy. This change involved moving from providing business units with operating grants to project-specific funding for technology development.

ARC introduced a records/information management program to support its business activities and ensure compliance with records management regulation and the Freedom of Information and Protection of Privacy (FOIP) legislation.

Strategy 6 **Implement a corporate communications and customer engagement plan**

ACTIVITIES

ARC business units developed individual plans and reported on the number of repeat and new customer contacts. In addition, under an agreement with the National Research Council's Industrial Research Assistance Program (IRAP), ARC receives information on the customers contacted by IRAP each month. This strengthens the total effectiveness of the overall business development.

OUTPUTS

ARC developed a business development and customer engagement plan to help achieve its 1999/00 targets. This plan will be implemented during the next fiscal year. The efforts of individual business units alone cannot achieve our targets. Success will also require the coordinated efforts of the Management Group, Planning and Development, Market Intelligence, Technology Commercialization and Corporate Relations to engage key players and customers.

Performance Measures at ARC

ARC first measured its contribution to the Alberta economy in February 1993, when it published *Milestones, How the Alberta Research Council contributes to the economy of the Province*, based on a wealth creation model. Wealth was the result of increased private sector activity and cost reduction and increased revenue to the government.

Since 1993, this model has evolved, in part through discussions with Alberta Treasury. In the new model, the stimulation of sales of ARC's customers and partners resulting from working with ARC is the principle means of ARC's economic impact. ARC has defined its economic impact on the Province of Alberta as consisting of the following:

- incremental domestic and export sales of ARC's customers and partners
- new investments in ARC's partners
- revenue obtained from outside Alberta, and
- cost reductions resulting from technical or process innovations

Data on these measures, as well as information on sales stimulation and job creation estimates are obtained in consultation with customers and partners, depending on the ARC partner relationship.

Short-term research and development (R&D)—conducted primarily through industry-sponsored projects. The impact of these projects is measured through customer satisfaction surveys.

Medium-term R&D—conducted through Joint Research Ventures and other partnership arrangements. The impact of these projects occurs over varying multi-year time frames, and is measured through high-level performance impact interviews of audits with the partners, which are reviewed and approved by the companies.

Long-term R&D—conducted primarily through consortium-type arrangements, where several industrial partners and ARC contribute to the research projects and all partners have rights to the results. Impact is more difficult to measure, because of the long-term nature. Estimates have been obtained from two such projects, which have been ongoing since the early 1980s.

Performance Measures—Definitions

Economic impact—this measure provides information on the economic impact in Alberta through work that the ARC does with its customers and partners. Economic impact takes the form of incremental domestic and export sales, new investment, out-of-province revenue, and cost savings from increased efficiencies and productivity.

Job creation—this measure provides information on stimulation of export sales (and domestic sales) by ARC customers and partners through the development and sale of new technology products and services. This leads to the improved performance of companies and their ability to hire more employees or to protect the jobs of existing employees.

Mission effectiveness—this measure provides information on ARC's increasing effectiveness in supporting prosperity for Alberta through growth in business and industry. It is calculated through a simple formula—economic impact divided by government investment.

R&D funding from the private sector—this measure provides information on funds received by ARC from sources other than the provincial government.

Government investment—this measure provides information on the investment of provincial government funds in ARC.

Ratio of private R&D/government investment—this measure provides information on the ratio of private sector R&D funding to government investment in ARC.

NB: ARC recognizes that economic impact and job creation are based on the success of its customers and partners and are, therefore, not directly controllable by ARC. These numbers are also likely to be influenced by commodity prices, given Alberta's continued reliance on its natural resource sectors.

Alberta Oil Sands Technology and Research Authority (AOSTRA)

The key change in 1998/1999 is the transfer of responsibility for energy related research from the Department of Energy (as the Research and Technology Branch) to the Ministry of Science, Research and Information Technology (as AOSTRA).

The transfer of Intellectual Property to the Alberta Research Council will promote the commercialization of the government's investment in energy-related technology.

The following strategy and performance measure were transferred from the Energy Business Plan 1998/1999 to 2000/2001 with AOSTRA:

Strategy

- **Stimulate research and development of new technologies that ensure resource development is economically and environmentally viable.**

Performance Measure

- **Ratio of Industry to Ministry Research Spending – Target of 3:1 by 1998/99**

OUTCOMES

AOSTRA does not engage in research. ASOTRA supports and encourages industry to undertake research that improves energy resource development. For projects where AOSTRA funds are provided, the ratio of industry to AOSTRA spending indicates AOSTRA's effectiveness in promoting research.

Performance Measure

Performance Measure Discontinued

AOSTRA discontinued its work on measuring performance based on the "Ratio of Industry to Ministry Research Spending - Target of 3:1 by 1998/99" because reliable data is not available. Once data is readily available, this measure may be reintroduced. AOSTRA is developing more appropriate performance measures.

Alberta Heritage Foundation for Medical Research

GOAL #1

To Maintain International Standards of Excellence Through an Appropriate and Effective Peer Review System.

- As of March 31, 1999, 162 AHFMR funded researchers and 273 scientists-in-training are supported at the University of Alberta, the University of Calgary, and the University of Lethbridge. A further 53 mental health and health services researchers are funded through the province's Health Research Fund, administered by AHFMR. All awards to personnel are made according to the highest international criteria for excellence. To fulfil this purpose, more than 450 reviewers from all over the world provide us with their reviews or sit on 12 AHFMR standing review committees for awards competitions.

GOAL #2

To Manage Expenditures to Ensure the Continuance of AHFMR for Future Generations While Avoiding Significant Fluctuations in Annual Spending.

- The AHFMR Endowment was created in 1980 with \$300 million. As of March 31, 1999, the AHFMR Endowment has more than tripled. The cumulative funding for biomedical and health research since 1980 now totals over \$570 million. AHFMR maintains quarterly meetings with Alberta Treasury, as well as annual meetings between Treasury and AHFMR's Board of Trustees. The budget for 1998/99 was \$38.5 million.

GOAL #3

To Maintain and Strengthen Basic Research in Order to Discover the Underlying Causes of Disease and Provide a Foundation for Patient and Health Research, the Practice of Medicine and Prevention of Disease.

- For 1998/99, new awards granted over the next five-year period in various areas of medical research totalled \$37 million,

an increase of \$10 million from the previous year.

- Of this total, \$30 million was awarded to 56 basic medical researchers. Key basic research accomplishments include: discovery of an anti-cancer virus, new strides in diabetes research, new tools to help fragile babies, and new information about toxins present in algae food supplements.
- \$7 million was awarded to 13 health researchers working in these areas: the epidemiology and prevention of depression, legal issues in the use of genetic services, cost-effectiveness of total joint replacement in the elderly, health and the labour market, and incentives and accountability in publicly funded health care using mental health and substance abuse treatment as models.

GOAL #4

To Expand AHFMR Support of Patient-Based and Health Research in Alberta and Lead New Initiatives in These Areas.

In fall of 1995, AHFMR entered into a five-year contract with Alberta Health and the resulting Health Collaboration Agreement expanded the research function of the Foundation in the following ways:

- In 1998/99, a total of \$1.47 million in operating grants was awarded to 18 researchers from the Health Research Fund, now administered by AHFMR on behalf of Alberta Health. A further \$600,000 will be received by researchers conducting on going projects approved in last year's competition.
- Research projects funded include: evaluative tools to gauge health risk factors for new-borns, approaches to help communities identify resources and develop programming to improve social health, investigating better ways to prioritize patients on cataract surgery

waiting lists, determining if sociodemographic factors like gender, race, income and remote location influence access to heart procedures, developing a new therapy that can identify symptoms of depression, investigating the use of a nutritional supplement to improve the health of fibromyalgia sufferers, and studying the barriers and gateways to using research results in clinical care.

- AHFMR's Health Research Agenda, developed in 1996, continues to guide the Foundation in allocating the most effective and efficient support for health research activity throughout the province.
- AHFMR's Health Technology Assessment Unit produced 11 assessments, including reports on cord blood transplantation, and functional diagnostic imaging in epilepsy and cryosurgery for prostate cancer. There were also information papers on payback from AHFMR-funded research and on pathology services under fixed funding arrangements. In addition, 9 papers were published externally in journals and 12 presentations were made at conferences. The Unit handled 50 information requests.
- Nine new health researchers received independent investigator awards such as the Population Health Investigator, Scholar or Senior Health Scholar. This brings the total of investigators supported in health research to 21.

GOAL #5

To Maintain Research Education and Training Programs and Encourage Young Albertans to Pursue Research Careers.

- \$5.6 million awarded in fellowships, clinical fellowships, studentships and summer studentships to 450 researchers in training.
- An AHFMR-led collaboration of Alberta Health, Provincial Mental Health Board, and the 17 RHAs resulted in the second, community health research training program called SEARCH II (Swift Efficient Application of Research in

Community Health). The one million dollar, AHFMR-funded program is training 21 participants in tailor-made, intensive modules. The participants are linked in a province-wide computer network and are involved in individual and group projects based on health needs prioritized by their regions. Information from the research projects will help regions make evidence-based budget and program decisions. Project topics include: a study of how "On Call" affects Alberta family physicians, use of an assessment tool for patients suffering from acute mental illness, and a study of immunization rates compared to vaccine preventable disease outbreaks and hospital admittances.

- Lionel McLeod scholarship awarded to University of Calgary doctoral/MD student in the Department of Community Health Sciences, Ms. Karin Dymond, for studies in injury prevention.
- Heritage funding to biomedical engineering over the past decade has contributed significantly to the development of this field in Alberta. In 1997, a joint proposal from U of A and U of C to develop a graduate degree in biomedical engineering was funded by the Special Opportunity Fund of the US-based Whitaker Foundation for \$1.3 million.

GOAL #6

To Encourage Increased Collaboration in Alberta, Canada, and Elsewhere Among Investigators, Research Institutions, Governments, Other Granting Agencies and the Private Sector.

- AHFMR established the AHFMR Opportunity Fund, a five-year \$15 million program to support major research infrastructure projects in partnership with federal and provincial government partners.
- AHFMR hosted first-ever Health Congress in May 1998.
- AHFMR awarded 17 conference and visiting lecturer grants for university personnel.

- AHFMR awarded four travel and visiting lecturer grants to health personnel in regional health authorities.
- AHFMR senior staff participation in the governance/Boards/Committees of the Canadian Institutes for Health Research, National Institute for Nutrition, NCIC, Institute of Health Economics, Intellectual Infrastructure Partnership Program, Canadian Health Services Research Foundation, and the Canadian Foundation for Innovation.

GOAL #7

To Continue to Promote the Development of Medical Research-Related Economic Activities in Alberta, Including the Commercialization of Innovations.

- Received 34 applications and funded 18. Total amount funded was \$1.9 million.
- TC News published a thrice-yearly report on activities of companies supported by the Technology Commercialization Program.
- Business graduate intern program funded four interns, one to work at the U of A's Industry Liaison Office, one with U of C's University Technologies International, one at the University of Alberta, one working with the U of A and AHFMR as a summer student, and one with the Canadian Bacterial Diseases Network at the U of C.

GOAL #8

To Maintain and Improve Communication with the Public, Government, the Research Community, Universities, and Health-related Institutions.

- AHFMR publications include Newsletters, Annual Report, HTA Reports, Triennial
- AHFMR and SEARCH Web sites established and maintained
- AHFMR monthly news bulletins to MLAs maintained
- AHFMR media work highlights research

accomplishments of funded personnel on a monthly basis

- AHFMR "Spectrum" a public report of research activity supported by the Foundation, was distributed to a 3000 name mailing list.
- AHFMR supported third Alberta Lung Association fundraising gala
- AHFMR supported two science students as media fellows, one with CBC Radio in Edmonton, the other with CBC radio in Calgary
- AHFMR supported the placement of a grade 11 student in the lab of a Heritage researcher at the U of A for the U of A's Women in Science, Engineering, Scholarship and Technology summer training program.
- AHFMR supported the Alberta Science Fair program with prize money for seven regional winners.
- AHFMR participated in the Alberta Teachers Association Science Council Conference in October, with an AHFMR funded scientist as a guest speaker.
- AHFMR sponsored "Science and Medicine" category at the 1998 YWCA Women of Distinction Awards.

GOAL #9

To Develop a Mechanism for the Continuing Review and Updating of the AHFMR Strategic Plan and for Setting Priorities.

- AHFMR's Board of Trustees meets quarterly to review planning and directions
- An international Board of Review (which AHFMR is legislated to organize every six years) met in September of 1998, releasing a Report in December that reviewed AHFMR's activities and recommended directions

Key Factors Affecting Performance

AHFMR performance is based on its primary function of funding research. The number of proposals submitted and quality of applications is a main determining factor in any of the awards competitions. Since AHFMR works in partnership with the province's universities to recruit and pay salaries of researchers, initiatives on the part of the universities play a large part in recruiting the best and brightest researchers to Alberta. In 1998, an International Board of Review endorsed AHFMR's directions and activities and confirmed AHFMR's seminal role in the province in establishing and continuing to build a first-class research community.

Anticipated Changes or New Directions in 1998/99

The establishment over the past 19 years of a top quality research community and brain trust in Alberta is attracting funding from outside sources at a rate of \$2-3 dollars for every AHFMR dollar invested. AHFMR seeks out and initiates new opportunities for matching funding and for collaborative

ventures with other provincial and national funding bodies. AHFMR also seeks out opportunities to expand its research portfolio and close the loop between health research results and medical innovations and their application and effectiveness in the health system.

Changes Needed to Measure Performance

Currently, universal mechanisms for measuring comprehensive, overall performance in medical and health research and the impact of that research in socioeconomic terms do not exist. The Foundation carefully tracks the usual scientific metrics of publications, citations and career performance. Other measures, such as case studies are highlighted in AHFMR's publications. During 1998/99, the Foundation organized an international workshop focused on discussing the challenge of measuring the impact of investment on research.

Public Accounts 1998/99

Preface

The Public Accounts of Alberta are prepared in accordance with the *Financial Administration Act* and the *Government Accountability Act*. The Public Accounts consist of the annual report of the Government of Alberta and the annual reports of each of the 18 Ministries.

The annual report of the Government of Alberta released in June contains the Provincial Treasurer's accountability statement, the consolidated financial statements of the Province and a comparison of the actual performance results to desired results set out in the government's business plan, including the Measuring Up report.

This annual report of the Ministry of Science, Research and Information Technology contains the Minister's accountability statement, the audited

consolidated financial statements of the ministry and a comparison of actual performance results to desired results set out in the ministry business plan. This ministry annual report also includes:

- the financial statements of entities making up the ministry including regulated funds and provincial agencies for which the Minister is responsible.
- other financial information as required by the *Financial Administration Act* and *Government Accountability Act*, either as separate reports or as part of financial statements, to the extent that the ministry has anything to report.
- financial information relating to other organizations in which includes the Minister is charged with administration of their Act.

Management's Responsibility for Reporting

The Ministry of Science, Research and Information Technology includes:

*Alberta Science and Research Authority
Science and Research Fund
Alberta Research Council
Alberta Oil Sands Technology and
Research Authority - Oil Sands Technology
and Research Fund
Alberta Heritage Foundation for Medical
Research
Alberta Foundation for Health Research*

The executives of the individual entities within the ministry have the primary responsibility and accountability for the respective entities. Collectively, we ensure the ministry complies with all relevant legislation, regulations and policies.

Ministry business plans, annual reports, performance results and the supporting management information are integral to the government's fiscal and business plans, annual report, quarterly reports and other financial and performance reporting.

Responsibility for the integrity and objectivity of the consolidated financial statements and performance results for the ministry for the year ended March 31, 1999, rests with the Minister of Science, Research and Information Technology. Under the direction of the Minister, I oversee the preparation of the ministry's annual report, including consolidated financial statements and performance results. The consolidated financial statements and the performance results, of necessity, include amounts that are based on estimates and judgments. The consolidated financial statements are prepared in accordance with the

government's stated accounting policies.

As Deputy Minister, in addition to program responsibilities, I establish and maintain the ministry's financial administration and reporting functions. The ministry maintains systems of financial management and internal control which give consideration to costs, benefits, and risks that are designed to:

- provide reasonable assurance that transactions are properly authorized, executed in accordance with prescribed legislation and regulations, and properly recorded so as to maintain accountability of public money;
- provide information to manage and report on performance;
- safeguard the assets and properties of the Province under ministry administration;
- provide Executive Council, Treasury Board, the Provincial Treasurer and the Minister any information needed to fulfill their responsibilities; and
- facilitate preparation of ministry business plans and annual reports required under the Government Accountability Act.

In fulfilling my responsibilities for the ministry, I have relied, as necessary, on the executive of the individual entities within the ministry.



Roger Palmer
Deputy Minister
Innovation and Science

Financial Results and Performance

Financial Results

Accountability

Financial results of the Ministry of Science, Research and Information Technology (the Ministry) include the Alberta Science and Research Authority (ASRA), Alberta Research Council (ARC), Alberta Oil Sands Technology and Research Authority (AOSTRA) as well as the Science and Research Fund (Fund) for the year ended March 31, 1999. More detailed information can be found in the ministry's financial statements on (pages ____).

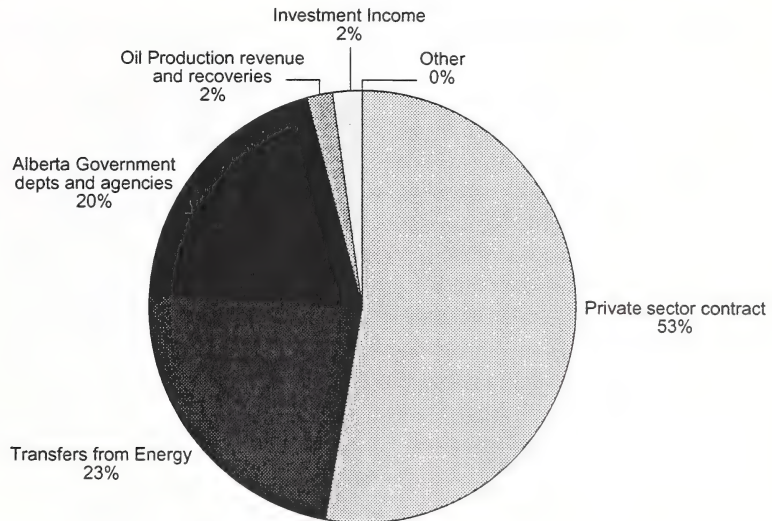
	(In thousands)		
	1999	1998	
	Budget	Actual	Actual
Revenue			
Alberta Science and Research Authority	\$ -	\$17	\$3
Science and Research Fund	16,500	17,249	5,074
Alberta Research Council	49,901	61,214	57,795
Alberta Oil Sands Technology Research	9,200	9,078	-
<i>Consolidation adjustment</i>	<i>(41,863)</i>	<i>(51,891)</i>	<i>(38,408)</i>
Consolidated revenue	33,738	35,667	24,464
Expenses			
<i>Voted</i>			
Minister's Office	250	254	224
Alberta Science and Research Authority	44,815	44,776	30,022
<i>Statutory</i>			
Science and Research Fund	16,500	16,296	3,344
Alberta Research Council	49,515	60,457	57,101
Alberta Oil Sands Technology and Research Authority	16,390	15,279	-
<i>Valuation Adjustments:</i>			
Provision for vacation pay	-	284	17
Write-down of capital assets	-	-	456
<i>Consolidation adjustment</i>	<i>(41,863)</i>	<i>(52,237)</i>	<i>(38,408)</i>
Consolidated expense	85,607	85,109	52,756
Net operating results	\$ (51,869)	\$ (49,442)	\$ (28,292)

Source: Ministry of Science, Research and Information Technology Financial Statements for the year ended March 31, 1999.

Revenues

Revenues for the Ministry of Science, Research and Information Technology amounted to \$36 million in 1998/99. nineteen million dollars of the \$36 million is comprised of private sector contracts, \$15 million from Alberta government departments (including \$8 million in transfers from the Department of Energy) and \$2 million from oil production and investment income. Note that all variances described below have been netted against consolidation adjustments for analytical purposes.

Revenue by type - \$36 million (net of \$52 million consolidation adjustment)



Comparison of 1998/99 actuals to 1998/99 budget by entity.

Actual revenues in the amount of \$36 million were \$2 million more than the \$34 million budgeted in the 1998 - 1999 estimates. This increase is primarily due to an increase of \$2 million in contract revenue recorded by ARC. Additional information on ARC can be found in ARC's annual report. Budgeted amounts reflected in ARC's annual report are those approved by ARC's Board, whereas budgeted amounts reflected in this document conform with the amounts published in the 1998/99 Government Estimates.

Comparison of 1998/99 actuals to 1997/98 actuals by entity.

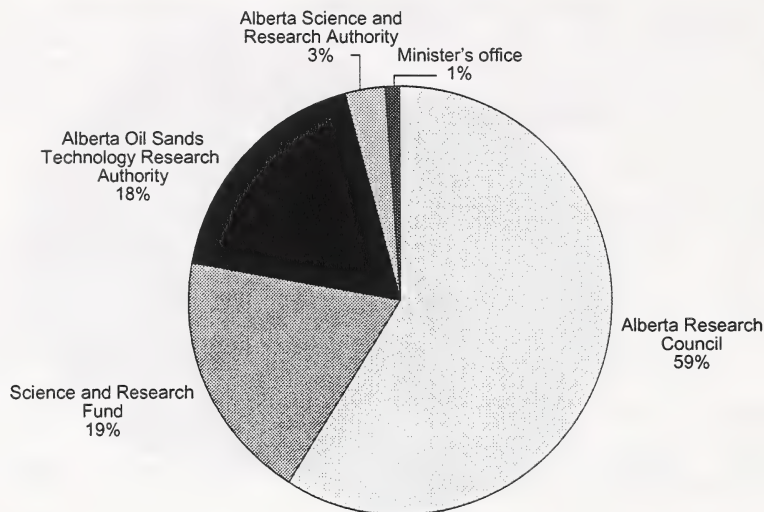
Comparative revenues between March 31, 1998 and March 31, 1999 increased \$11 million. This increase is primarily due to the transfer of \$9 million in AOSTRA revenues from Energy to the Ministry in February 1999. The remaining \$2 million increase in revenues is primarily due to increases in ARC's contract revenue and interest income in the fund.

Expenses

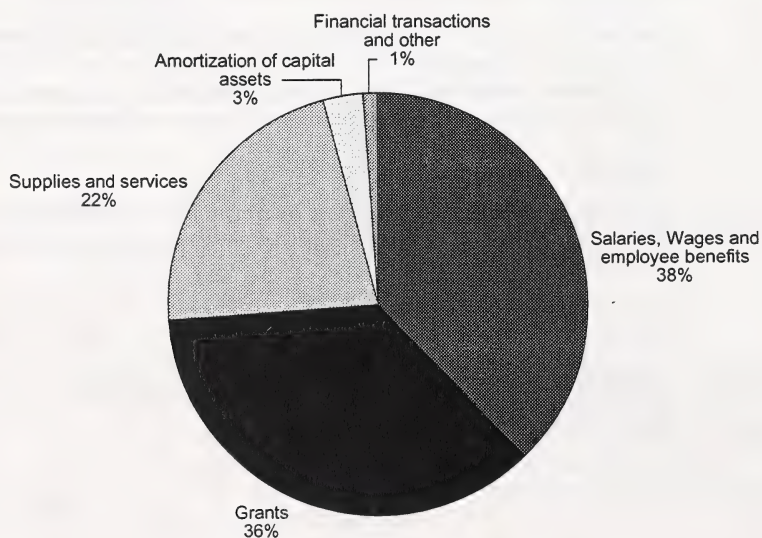
The Ministry of Science, Research and Information Technology incurred expenses of \$85 million for 1998/99. Expenses have been shown net of the \$52 million in consolidation adjustments for analytical purposes.

fifty one million dollars of the \$85 million in expenses was incurred in the development and commercialization of technologies through ARC, \$16 million to support strategic science and research initiatives through the Fund, \$15 million to assist in new technology developments regarding petroleum recovery and processing by AOSTRA, and \$3 million to support the operating expenditures of ASRA.

Expenses by Entity - \$85 million (Program represents services to Albertans)



Expenses by Object - \$85 million (Object represents government classification/type of expense)



Comparison of 1998/99 actuals to 1998/99 budget.

The net variance between actual and budgeted figures published in the 1998/99 government estimates was \$.5 million and is comprised of several nominal variances as well as 2 larger variances which are detailed below:

- ARC experienced a net variance of \$1 million over budget primarily due to increased revenue funded project costs;
- \$1 million unexpended variance for AOSTRA is comprised of \$2.3 million decrease in expenditures for in situ oil sands, \$.7 million decrease in oil and natural gas recovery, \$.5 million decrease in bitumen and heavy oil upgrading, \$1 million decrease in environmental technologies as well as a \$.5 million decrease in technology management. These decreases in program expenditures were offset by an increase of \$4 million in the oil sands mining and extraction program.

Comparison of 1998/99 actuals to 1997/98 actuals.

Net expenditures for the Ministry were \$32 million more in 1998/99 than previously recorded in 1997/98 and is comprised of

- \$15 million increase due to the transfer of AOSTRA to the Ministry from Energy;
- \$13 million increase in expenditures attributable to the Fund which increased grant expenditures in the following programs
 - \$.7 million increase in information and communication technologies;
 - \$1.5 million increase in commercialization programs;
 - \$.8 million increase in applied mathematical research;
 - \$.6 million increase in biotechnology programs;
 - \$.6 million increase in the transportation engineering and research program;
 - \$1.7 million increase in forestry and health research, natural resources and other miscellaneous programs, and administration.
- \$3 million increase in expenditures made by ARC primarily due to increases in grants (\$2 million) and contract revenue (\$1 million).
- \$1 million increase in expenses incurred by ASRA due to an increase in operating expenses

Performance

A key measure of the Ministry's performance is a comparison of authorized voted gross expenses, as approved by the Legislature, less any budgeted dedicated revenues associated with those expenses compared to actual results.

(In thousands)				
	Authorized	1999		1998
		Actual	Unexpended (Over- expended)	Unexpended (Over- expended)
Expenses				
<i>Voted</i>				
Ministers Office	\$ 253 (a)	\$ 254	\$ (1)	\$ 26
Alberta Science and Research Authority	44,910 (b)	44,776	134	476
	\$ 45,163	\$ 45,030	\$ 133	\$ 502

(a) Includes \$250,000 in voted operating expenses plus an additional \$3,000 supplementary estimate for the Alberta Science and Research Authority's share of the \$27,400,000 annual achievement bonus.

(b) Includes \$43,395,000 in voted operating expenses plus an additional \$95,000 supplementary estimate for the Alberta Science and Research Authority's share of the \$27,400,000 annual achievement bonus plus \$1,420,000 associated with the transfer of the Alberta Oil Sands Technology and Research Authority from Energy.

Uncertainty Due to the Year 2000

The year 2000 issue is the result of some computer systems using two digits rather than four to define the applicable year. Government computer systems that have date sensitive software may recognize a date using "00" as the year 1900 rather than the year 2000, which could result in miscalculations or system failures.

In addition, similar problems may arise in some systems if certain dates in 1999 are not recognized as a valid date or are recognized to represent something other than a date. The effects of the year 2000 issue may be experienced before, on, or after January 1, 2000. If not addressed, the effect on operations and financial reporting may range from minor errors to significant systems failure that could affect the ability to conduct some government operations. Despite the government's efforts to address this issue, it is not possible to be certain that all aspects of the year 2000 issue affecting the government, including those related to the efforts of customers, suppliers and other third parties, will be fully resolved.

MINISTRY OF SCIENCE, RESEARCH AND INFORMATION TECHNOLOGY

FINANCIAL STATEMENTS

MARCH 31, 1999

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MINISTRY OF SCIENCE, RESEARCH AND INFORMATION TECHNOLOGY

CONSOLIDATED FINANCIAL STATEMENTS

MARCH 31, 1999

Auditor's Report

Consolidated Statement of Operations

Consolidated Statement of Changes in Financial Position

Consolidated Statement of Financial Position

Notes to the Consolidated Financial Statements

Schedule of Expenses by Object Detail

AUDITOR'S REPORT

To the Members of the Legislative Assembly

I have audited the consolidated statement of financial position of the Ministry of Science, Research and Information Technology as at March 31, 1999 and the consolidated statements of operations and changes in financial position for the year then ended. These financial statements are the responsibility of the Ministry's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

The following accounting policies are exceptions from generally accepted accounting principles:

Administration costs incurred by the Department of Energy related to the Alberta Oil Sands Technology and Research Authority should not have been recorded in the accompanying consolidated statement of operations. Instead, the budget appropriation of \$1,480,000 and related actual expenses of \$1,360,000 should have been recorded in the financial statements of the Department of Energy. During the year, an Order in Council transferred the responsibility for the Oil Sands Technology and Research Authority *Act* from the Minister of Energy to the Minister Responsible for Science, Research and Information Technology. However, the Order in Council did not transfer any portion of the budget appropriation or actual expenses that related to the Department of Energy's administrative

support for the Authority. For the year ended March 31, 1999, the Ministry of Science, Research and Information Technology's budget and expenses recorded in these financial statements are overstated by \$1,480,000 and \$1,360,000 respectively.

Also, the Ministry of Science, Research and Information Technology is required to follow the corporate government accounting policies and reporting practices as disclosed in Note 3. These accounting policies have been established by Alberta Treasury and are consistent across ministries. With certain exceptions, the basis of accounting is in accordance with generally accepted accounting principles. My reservation of opinion in this auditor's report identifies two exceptions from generally accepted accounting principles that arise from following the accounting policies established by Alberta Treasury.

Pension Obligations

Obligations to pension plans for current and former employees of the Ministry, with the exception of the Alberta Research Council, have not been recognized as a liability in the accompanying statement of assets and liabilities and consequently the annual change in the liability has not been recognized in the statement of operations. In my view, on a basis of allocation similar to that used for Provincial agencies, an amount of approximately \$76,000 due to pension plans at March 31, 1999, in the Ministry's capacity as employer, and which is reflected in the financial statements of the Department of Treasury, should be recognized as a liability in these financial statements. The effect of not recognizing the annual change in the liability is to overstate the Ministry's expenses for the year ended March 31, 1999 by \$36,000.

Excluded Direct Costs

Accommodation and certain other administration costs incurred in the operation of the Ministry have not been included in expenses. These costs,

estimated at \$9,662,000 are recorded by the departments that paid the expenses on behalf of the Ministry.

In my opinion, except for the effect of the matters discussed in the preceding section, these consolidated financial statements present fairly, in all material respects, the financial position of the Ministry as at March 31, 1999 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles.

Original signed by
Peter Valentine, FCA
Auditor General

Edmonton, Alberta
May 21, 1999

**MINISTRY OF SCIENCE,
RESEARCH AND INFORMATION TECHNOLOGY
CONSOLIDATED STATEMENT OF OPERATIONS
FOR THE YEAR ENDED MARCH 31, 1999**

(In thousands)

	1999		1998
	Budget	Actual	Actual
	(Note 16)		
Revenue			
Private sector contracts	\$20,986	\$18,799	\$16,334
Transfers from Energy	8,200	8,200	-
Alberta government departments and agencies	7,759	7,024	8,053
Oil production revenue and recoveries	500	776	-
Investment income	-	749	74
Other	500	119	3
	<u>37,945</u>	<u>35,667</u>	<u>24,464</u>
Expenses (Schedule 1)			
Minister's Office	250	254	224
Alberta Science and Research Authority	2,952	2,912	1,372
Alberta Oil Sands Technology and Research Authority	16,390	14,996	-
Alberta Research Council	53,722	50,712	47,342
Strategic Research Initiatives	16,500	15,951	3,344
Valuation adjustments:			
Provision for vacation pay	-	284	17
Write-down of capital assets	-	-	457
	<u>89,814</u>	<u>85,109</u>	<u>52,756</u>
Net operating results	<u><u>\$(51,869)</u></u>	<u><u>\$(49,442)</u></u>	<u><u>\$(28,292)</u></u>

The accompanying notes and schedule are part of these consolidated financial statements.

MINISTRY OF SCIENCE, RESEARCH AND INFORMATION TECHNOLOGY
CONSOLIDATED STATEMENT OF CHANGES IN FINANCIAL POSITION
FOR THE YEAR ENDED MARCH 31, 1999
(In thousands)

	1999	1998
	Actual	Actual
Operating transactions:		
Net operating results	\$(49,442)	\$(28,292)
Non-cash items included in net operating results:		
Provision for future project abandonment	2,629	-
Amortization	2,610	2,210
Write down of capital assets and marketable securities	-	457
	(44,203)	(25,625)
Increase in accounts receivable	(420)	(1,823)
Increase in other current assets	(97)	(29)
Increase in accounts payable	4,972	2,757
Increase in unearned revenues	(95)	621
Decrease in pension obligations	(475)	(908)
	3,885	618
Cash provided by operating transactions	(40,318)	(25,007)
Investing transactions:		
Net assets transferred from Alberta Oil Sands Technology and Research Authority	24,415	-
Purchase of capital assets	(2,426)	(2,401)
Proceeds from disposal of capital assets	23	49
Cash provided (used) by investing transactions	22,012	(2,352)
Financing transactions:		
Net transfers from general revenues	45,396	29,656
Net cash provided	27,090	2,297
Cash and marketable securities at beginning of year	15,424	13,127
Cash and marketable securities at end of year	\$42,514	\$15,424

The accompanying notes and schedule are part of these consolidated financial statements.

MINISTRY OF SCIENCE, RESEARCH AND INFORMATION TECHNOLOGY
CONSOLIDATED STATEMENT OF FINANCIAL POSITION
AS AT MARCH 31, 1999
(In thousands)

	1999	1998
Assets:		
Financial assets:		
Cash and marketable securities (Note 5)	\$42,514	\$15,424
Accounts receivable (Note 6)	8,135	7,715
Other	307	210
Capital assets (Note 7)	<u>10,727</u>	<u>10,934</u>
	<u>\$61,683</u>	<u>\$34,283</u>
Liabilities and net assets:		
Accounts payable and accrued liabilities (Note 8)	\$17,491	\$12,519
Accumulated provision for project abandonment (Note 9)	2,629	-
Unearned contract revenue	1,074	1,169
Pension liability (Note 10)	<u>1,204</u>	<u>1,679</u>
	22,398	15,367
Net assets	<u>\$39,285</u>	<u>\$18,916</u>
 Net assets at beginning of year	 \$18,916	 \$17,552
Net operating results	(49,442)	(28,292)
Net transfers from general revenues	45,396	29,656
Net assets transferred from the Ministry of Energy	<u>24,415</u>	<u>-</u>
Net assets at end of year	<u>\$39,285</u>	<u>\$18,916</u>

The accompanying notes and schedule are part of these consolidated financial statements.

MINISTRY OF SCIENCE, RESEARCH AND INFORMATION TECHNOLOGY

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED
MARCH 31, 1999

Note 1 Authority

The Minister responsible for Science, Research and Information Technology has been designated as responsible for various Acts by the Government Organization Act and its regulations. To fulfill these responsibilities, the Minister administers the organizations listed below. The authority under which each organization operates is also listed. Together, these organizations form the Ministry of Science, Research and Information Technology.

Organization	Authority
Alberta Science and Authority	Science and Research Authority Act
Alberta Research Council	Alberta Research Council Act
Science and Research Fund	Science and Research Authority Act
Alberta Oil Sands Technology and Research Authority	Oil Sands Technology Authority Act

Note 2 Purpose

The purpose of the Ministry is to enhance the contribution of science, research and information technology to the sustainable prosperity and quality of life of all Albertans, and to provide information and services in technology through application and applied research.

Note 3 Summary of Significant Accounting Policies and Reporting Practices

These consolidated financial statements are prepared in accordance with the following accounting policies that have been

established by government for all Ministries. The recommendations of the Public Sector Accounting Board of the Canadian Institute of Chartered Accountants are the primary source for the disclosed basis of accounting. Recommendations of the Accounting Standards Board of the Canadian Institute of Chartered Accountants, other authoritative pronouncements, accounting literature and published financial statements relating to either the public sector or analogous situations in the private sector are used to supplement the recommendations of the Public Sector Accounting Board where it is considered appropriate.

(a) Reporting entity

The consolidated reporting entity is the Ministry of Science, Research and Information Technology and includes the activities of the Alberta Research Council, the Science and Research Fund, the Alberta Science and Research Authority, including the Minister's Office and effective April 1, 1998, the Alberta Oil Sands Technology and Research Authority. The financial statements for the individual entities provide more detailed information about the operations of each entity.

The Alberta Heritage Foundation for Medical Research (the Foundation) is required to forward a copy of its annual report to the Minister for tabling in the Legislature. However, the consolidated financial statements of the Foundation are not consolidated in these financial statements pursuant to section 4 of the Alberta Heritage Foundation for Medical Research Act. Further details on the financial activities of this entity and its subsidiary, The Alberta Foundation for Health Research, can be found in the Ministry's 1998-99 Annual Report.

All departments of the Government of Alberta, including the Alberta Science and Research Authority, operate within the General Revenue Fund (the Fund). The Fund is administered by the Provincial Treasurer. All cash receipts of departments, including the Alberta Science and Research Authority, are deposited into the Fund and all cash disbursements made by the departments, including the Alberta Science and Research Authority, are paid from the Fund. Net transfer to/from General Revenues is the difference between all cash receipts and all cash disbursements made.

(b) **Method of Consolidation**

The accounts of the Alberta Science and Research Authority, the Alberta Research Council, the Science and Research Fund, and the Alberta Oil Sands Technology and Research Authority are consolidated after adjusting them to a basis consistent with the accounting policies described below in (c). Revenue and expense transactions, investing and financing transactions, and related asset and liability accounts between consolidated entities have been eliminated.

(c) **Basis of financial reporting**

Revenues

All revenues are reported on the accrual method of accounting. Cash received for which goods or services have not been provided by year end is recorded as unearned revenue. Contract revenue is recognized as costs are incurred, up to the contract maximum and in accordance with contracted cost-sharing ratios. Full provision is made for all known or estimated losses on uncompleted contracts as soon as they can reasonably be estimated.

Royalties and licensing fee revenue is recognized when the amount can be reasonably estimated and there is reasonable assurance of collectability of proceeds.

Expenses

Expenses represent the costs of resources consumed during the year on the Ministry's operations. Expenses include amortization of capital assets.

For the Alberta Research Council, pension costs comprise the cost of pension benefits earned by employees during the year, interest on the Alberta Research Council's share of the unfunded pension liabilities, the amortization of gains or losses that relate to the long-term over the expected average remaining service life of the employee group, the immediate recognition of gains or losses for which there is reasonable assurance regarding measurement and realization, and the change in the Alberta Research Council's share of unfunded pension liabilities. The net expense or recovery is included as a part of salaries, wages and benefits.

For the Alberta Science and Research Authority, pension costs comprise the cost of employer contributions for current service of employees during the year and additional employer contributions for employees' service related to prior years.

Grants are recorded as expenditures when authorized and when all eligibility conditions have been satisfied.

Certain expenses, primarily for office space, legal advice, and banking services, incurred on behalf of the Ministry of Science, Research and Information Technology by other Ministries are not reflected in the Consolidated Statement of Operations.

Valuation Adjustments

Valuation adjustments represent the change in management's estimate of future payments arising from obligations relating to employee vacations.

Assets

Financial assets of the Ministry are limited to financial claims, such as advances to and receivables from other organizations, employees and other individuals. The fair values of the financial assets are estimated to approximate their book values. Fair value is the amount of consideration agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act.

Marketable securities are recorded at the lower of cost or quoted market value.

Accounts receivable are non-interest bearing and unsecured.

Capital assets of the Ministry are recorded at historical cost and amortized on a straight-line basis over the estimated useful lives of the assets. Development costs for facilities and equipment are capitalized when the technical feasibility of the technology is established and when estimated future revenue exceeds estimated future expenditure.

Expenditures for patents owned by the Alberta Research Council as a result of research activity are not capitalized due to the uncertain value of benefits that may accrue to the Alberta Research Council.

Expenditures on the acquisition or development of other intangible assets including intellectual capital are not capitalized as currently there is not an acceptable methodology for measuring the value of future benefits accruing to the Alberta Research Council.

Liabilities

Liabilities include all financial claims payable by the Ministry at fiscal year end except long term disability benefits and certain pension benefits of the Alberta Science and Research Authority, which are reflected in the financial statements of the

Department of Treasury on behalf of all departments, including the Alberta Science and Research Authority. The fair values of the liabilities are estimated to approximate their book values.

The Alberta Research Council records unfunded pension liabilities relating to Alberta Research Council employees who are members of the Public Service Pension Plan and the Management Employees Pension Plan. Pension costs comprise the cost of pension obligations earned by its employees during the year, interest on the Alberta Research Council's share of the unfunded pension liabilities, the amortization of gains or losses that relate to the long-term over the expected average remaining service life of the employee group, the immediate recognition of gains and losses for which there is reasonable assurance regarding measurement and realization, and the change in Alberta Research Council's share of the unfunded pension liabilities. The net expense recovery is included as part of salaries, wages and benefits.

Net Assets

Net assets represents the difference between the value of assets held by the Ministry and its liabilities.

Note 4 Changes in Operations and Programs

On February 3, 1999, responsibility for the Oil Sands Technology and Research Authority *Act* was transferred from the Ministry of Energy pursuant to Section 16 of the Government Organization Act. In accordance with the government's accounting policies, this transfer is recorded in these financial statements effective April 1, 1998. Comparative figures have not been restated. The effect of the transfer resulted in the Alberta Oil Sands Technology and Research Authority - Oil Sands Technology and Research Fund increasing the net assets of the Ministry by

\$24,415,000. In 1998, the Alberta Oil Sands Technology and Research Authority had net operating results of \$2,637,000.

On February 3, 1999, responsibility for energy research and technology was transferred from the Department of Energy pursuant to Section 16 of the Government Organization Act, which transferred responsibility for the Oil Sands Technology and Research Authority Act. In accordance with the government's accounting policies, this transfer is recorded in these financial statements effective April 1, 1998. Comparative figures have not been restated. The impact of the transfer on the 1998 actual amounts, would have been an increase in the Authority's operating expenses by \$1,528,000 to \$3,044,000 resulting in a decrease in the net operating results to \$31,788,000.

Note 5 Cash and Marketable Securities

Cash consists primarily of deposits in the Consolidated Cash Investment Trust Fund of the Province of Alberta. The Trust Fund is invested primarily in short-term and mid-term fixed income securities with a maximum term to maturity of five years. The securities are either issued or guaranteed by the Canadian federal and provincial governments, deposits given by or guaranteed by chartered banks, or short-

term investment-grade-quality notes of Canadian corporations. Due to the short-term nature of the Fund's investments, the carrying value approximates fair value. Interest is earned on the daily cash balance at the average rate of earnings of the Trust Fund, which varies depending on prevailing market interest rates.

Interest earned on cash balances in the Alberta Oil Sands Technology and Research Authority - Oil Sands Technology and Research Fund, in the amount of \$1,241,000 (March 31, 1998 - \$708,000) is credited to general revenues of the Province of Alberta and is therefore not reflected in these statements.

Information on marketable securities is contained in Note 15.

Note 6 Accounts Receivable

	(In thousands)			
	1999		1998	
	Gross Amount	Allowance for Doubtful Accounts	Net Realizable Value	Net Realizable Value
Commercial	\$5,636	\$347	\$5,289	\$5,115
Alberta government departments and agencies	2,846	-	2,846	2,600
	<u>\$8,482</u>	<u>\$347</u>	<u>\$8,135</u>	<u>\$7,715</u>

Note 7 Capital Assets

	(In thousands)			
	1999		1998	
	Cost	Accumulated Amortization	Net Book Value	Net Book Value
Buildings	\$5,916	\$2,070	\$3,846	\$4,094
Equipment	26,681	20,193	6,488	6,210
Furniture and fixtures	177	152	25	42
Computer equipment and software	3,689	3,321	368	588
	<u>\$36,463</u>	<u>\$25,736</u>	<u>\$10,727</u>	<u>\$10,934</u>

Note 8 Accounts Payable and Accrued Liabilities

	(In thousands)	
	1999	1998
Accounts payable	\$4,527	\$2,401
Accrued liabilities:		
- Vacation	2,666	2,553
- Other	10,298	7,565
	<u>\$17,491</u>	<u>\$12,519</u>

Note 9 Accumulated Provision for Future Project Abandonment

Under joint participation agreements, the Ministry will incur certain costs when wells and experimental projects are abandoned. Management's estimate of future abandonment costs for the following projects are:

	(In thousands)
	1999
0Amoco Block 1	\$1,612
UMATAC Project (ATP)	500
Amoco GLISP	411
Unocal Buffalo Creek	45
Husky Kearle Lake Project	35
Norcen Bodo	20
Others	6
	<u>\$2,629</u>

Note 10 Pension Liability

The Alberta Research Council participates with other employers in the Public Service and Management Employees pension plans. These plans provide pensions for the Alberta Research Council's employees based on years of service and earnings.

The Alberta Research Council's unfunded pension liability for the public Service plan and the Management Employees plan as at March 31 was estimated as follows:

	(In thousands)	
	1999	1998
Public Service Plan	\$730	\$732
Management Employees Plan	474	947
	<u>\$1,204</u>	<u>\$1,679</u>

The total unfunded pension liability for each plan as at March 31, 1999 was determined by actuarial valuations, as at December 31, 1997 for the Public service plan and as at December 31, 1997 for the Management Employees plan, both extrapolated to March 31, 1999. The 1998 comparative figures were based upon actuarial valuations as at December 31, 1995 for the Public Service Plan and as at December 31, 1996 for the Management Employees plan, both extrapolated to March 31, 1998.

The actuarial valuations were determined using the projected benefit method prorated on service. Assumptions used in the valuation are based on the Pension Board's best estimate of future events. The plans' future experiences will inevitably vary, perhaps significantly, from the assumptions. Any differences between the actuarial assumptions and future experiences will emerge as gains or losses in future valuations. Gains or losses which relate to the long-term are amortized over the expected average remaining service life of the employee group; gains and losses for which there is reasonable assurance regarding their measurement and realization are recognized in income immediately.

The Public Sector Pension Plans *Act* specifies the basis to determine the amount of the total unfunded liability for each plan which will be funded by employers. The Alberta Research Council's portion of those employers' liabilities was based on the Alberta Research Council's percentage of the total pensionable payroll of all employers.

Note 11 Obligation Under Operating Leases

The Ministry leases certain equipment under operating leases that expire on various dates to 2004. The aggregate amount payable for the unexpired terms of these leases are as follows:

	(In thousands)
Year ending March 31,	
2000	\$111
2001	86
2002	57
2003	43
2004	8
	<u>\$305</u>

Note 12 Commitments

The Ministry has commitments as at March 31, 1999 totalling \$10,569,000 (March 31, 1998 - \$5,486,000) for approved projects.

Note 13 Contingencies

- (a) During 1999, the Alberta Research Council was made aware of a \$4,079,000 claim naming the Alberta Research Council as the defendant. The claim relates to contamination of petroleum produced from certain oil wells and arises out of a joint venture agreement to develop drilling fluid that would act as fracturing agent. A previous claim naming the Alberta Research Council as one of the defendants related to the same contamination was settled in the prior year. This matter has been referred to the insurers and the likelihood of loss or the amount of loss to the Alberta Research Council is not determinable at this time. Any settlement that may occur would be accounted for as a charge against current year's earning at the time of settlement.
- (b) During 1999, a legal action relating to employee severance, claiming an amount of \$135,000, was commenced against the Alberta Research Council. The management of the Council believes that it has substantial defences to the claim asserted; however, the likelihood of loss or the amount of the loss is not determinable at this time. Any settlement that may occur would be accounted for as a charge against current year's earning at the time of settlement.
- (c) There is a dispute between the Alberta Oil Sands Technology and Research Authority and the former operator of the Underground Test Facility with respect to the accounting for bitumen sales, and the responsibility for the overrun, which occurred under the operator agreement. In the opinion of management the chances of these matters being resolved in the Authority's favor are not currently determinable.

Note 14 Related Party Transactions

The Ministry received revenues of \$8,200,000 from the Department of Energy. In addition, \$7,024,000 was received from other government departments and agencies.

The Ministry paid \$632,000 (1998 - \$494,000) to various other Government of Alberta departments, agencies or funds for supplies and/or services during the fiscal year. In addition, the Ministry paid Payment Systems Corporation (PSC), which until March 31, 1999, was a joint venture partially owned by the Province of Alberta, \$178,000 (1998 - \$61,000) for computer processing. Accommodations, legal, telecommunications, personnel, and certain financial costs were provided to the Ministry by other government organizations at no cost, but had an estimated value of \$9,662,000 (1998 - 7,733,000). There were no receivables or payables to related parties outstanding at year end.

The Ministry and its employees paid certain taxes and fees set by regulation for permits, licenses, and other rights. These amounts were included in the normal course of business and reflect charges applicable to all users.

Note 15 Financial Instruments

The fair values of cash, accounts receivable, accrued income receivable, and accounts payable and accrued liabilities approximate their carrying value.

In addition, at March 31, 1999, the Alberta Research Council owns the following:

- i) options, which expire May 5, 2001, to acquire 211,400 (1998 - 272,400) common shares of a public company exercisable at \$1 per common share. The market value of this public company's common shares at March 31, 1999 was \$2.32 (1998 - \$10.15) per share. During the year, the Alberta Research Council agreed to share royalty and licensing revenue related to Chembiomed Ltd. technology. One-half of future revenues from identified licensing agreements are designated for

collaborative carbohydrate research projects by the Alberta Research Council and the University of Alberta.

One-half of the exercised options to acquire the above noted 211,400 common shares are designated for collaborative carbohydrate research projects, as part of this agreement.

- ii) options, which expire March 31, 2003, to acquire 75,000 common shares of a public company exercisable at \$2 per common share. The market value of this public company's common shares at March 31, 1999 was \$4.65 (1998 - \$1.32) per share.
- iii) warrants, which expire June 30, 2002, to acquire 200,000 (1998 - nil) common shares of a public company exercisable at \$2 per common share. The market value of this public company's common shares at March 31, 1999 was \$0.40 per share.
- iv) 240,776 (1998 - nil) common shares of a non-publicly traded company. The market value of this company's common shares at March 31, 1999 is not reasonably determinable.
- v) 400,000 (1998 - nil) common shares of a non-publicly traded company. The market value of this company's common shares at March 31, 1999 is not reasonably determinable.
- vi) 17,392 Class A voting common shares of public company. The shares were received in 1998 as consideration for contract work provided by the Alberta Research Council to the company. These marketable securities were originally recorded at \$100,000 which represented the quoted market value of the shares at the time the contract work was completed. During the year, the marketable securities were valued at \$26,088 (1998 - \$71,307) to reflect the realize value at March 31, 1999.

The options, warrants and common shares which were originally acquired as part of the consideration for granting of various licenses, are recorded at nominal values, except otherwise noted.

The Alberta Research Council is subject to market risk with these stock options and warrants. As a result, the value of these financial instruments will fluctuate as a result of changes in market prices.

Note 16 Budget

The budget was derived from original government estimates approved on March 26, 1998 and the budget approved by the Alberta Research Council's Board of Directors on March 17, 1998. As a result of transfer of responsibility of the Alberta Oil Sands Technology and Research Authority from the Ministry of Energy, an additional amount of \$1,420,000 was allocated to the Alberta Science and Research Authority and an additional \$16,390,000 for the Alberta Oil Sands Technology and Research Authority - Oil Sands Technology and Research Fund was added to the Ministry budget.

Note 17 Uncertainty Due to the Year 2000

The year 2000 issue is the result of some computer systems using two digits rather than four to define the applicable year. Government computer systems that have date sensitive software may recognize a date using "00" as the year 1900 rather than the year 2000, which could result in miscalculations or system failures. In addition, similar problems may arise in some systems if certain dates in 1999 are not recognized as a valid date or are recognized to represent something other than a date. The effects of the year 2000 issue may be experienced before, on, or after January 1, 2000. If not addressed, the effect on operations and financial reporting may range from minor errors to significant systems failure that could affect the ability to conduct some government operations. Despite the government's efforts to address this issue, it is not possible to be certain that all aspects of the year 2000 issue affecting the government, including those related to the efforts of customers, suppliers and other third parties, will be fully resolved.

Note 18 Subsequent Events

The Alberta Science, Research and Technology *Act* comes into effect on April 1, 1999. The *Act* will continue the Alberta Science and Research Authority as the Alberta Science, Research and Technology Authority. The *Act* will dissolve the Alberta Science and Research Authority and the Science and Research Fund and their assets and liabilities will be vested in the new Authority.

In addition, effective April 1, 1999, the Lieutenant Governor in Council approved the incorporation of the Alberta Research Council Inc. as a wholly-owned subsidiary corporation of the Alberta Science, Research and Technology Authority.

On April 15, 1999 the Research Council entered into an agreement of "Principles Governing a Proposed Acquisition" with an arms-length third party research organization. Under the terms of the agreement the Research Council would acquire 10% of the share capital of the organization for no consideration. The agreement is subject to approval by the Board of Directors of the organization and Research Council, and the Province of Alberta. The total revenues of the organization as at December 31, 1998 (its fiscal year end) were approximately \$6.1 million and the net assets were approximately \$216,000.

On April 21, 1999, an Order in Council was approved by the Province of Alberta resulting in the transfer of the management and control of Petroleum Recovery Institute, and its subsidiary PRI Solutions, Inc. to the Alberta Research Council. Petroleum Recovery Institute is a consortium-funded, research and technology development company supporting the needs of the oil industry. Petroleum Recovery Institute's technologies are focused on improved

petroleum recovery from petroleum reservoirs. There was no consideration paid by Alberta Research Council on the transfer. Management estimates that revenues from the Petroleum Recovery Institute's operations for the fiscal year 2000 will be approximately \$2.0 million.

On May 25, 1999, the government announced a major re-organization. As a result, effective April 1, 1999, the Ministry of Science, Research and Information Technology was reorganized. The Ministry's responsibilities for the Alberta Science, Research and Technology Authority, as well as the Alberta Oil Sands Technology and Research Authority became part of the newly established Ministry of Innovation and Science.

Note 19 Comparative Figures

Certain 1998 figures have been reclassified to conform to the 1999 presentation.

Due from General Revenues reported in 1998 has been reclassified to net liabilities in 1999. The change in net liabilities reported on the Statement of Financial Position includes net transfer from General Revenues. As a result, the net contribution from General Revenues, as previously reported, is no longer required.

Note 20 Approval of Financial Statements

The financial statements were approved by the Senior Financial Officer and the President of the Alberta Science and Research Authority.

Schedule 1

MINISTRY OF SCIENCE, RESEARCH AND INFORMATION TECHNOLOGY CONSOLIDATED SCHEDULE OF EXPENSES BY OBJECT DETAIL FOR THE YEAR ENDED MARCH 31, 1999

	(In thousands)		
	1999	1998	
	Budget	Actual	Actual
Salaries, wages and employee benefits	\$34,402	\$31,641	\$29,210
Supplies and services	20,923	19,119	17,146
Grants	32,230	30,467	3,355
Amortization of capital assets	2,214	2,610	2,210
Financial transactions and other	45	1,272	835
	<u>\$89,814</u>	<u>\$85,109</u>	<u>\$52,756</u>

ALBERTA SCIENCE AND RESEARCH AUTHORITY

FINANCIAL STATEMENTS

MARCH 31, 1999

Auditor's Report

Statement of Operations

Statement of Changes in Financial Position

Statement of Financial Position

Notes to the Financial Statements

Schedule of Budget

Schedule of Voted Expenses by Program Detail

Schedule of Expenses Detailed by Object

AUDITOR'S REPORT

To the Minister of Innovation and Science

I have audited the statement of financial position of the Alberta Science and Research Authority as at March 31, 1999 and the statements of operations and changes in financial position for the year then ended. These financial statements are the responsibility of the Authority's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

The following accounting policies are exceptions from generally accepted accounting principles:

Administration costs incurred by the Department of Energy related to the Alberta Oil Sands Technology and Research Authority should not have been recorded in the accompanying statement of operations. Instead, the budget appropriation of \$1,480,000 and related expenses of \$1,360,000 should have been recorded in the financial statements of the Department of Energy. During the year, an Order in Council transferred the responsibility for the Oil Sands Technology and Research Authority Act from the Minister of Energy to the Minister Responsible for Science, Research and Information Technology. However, the Order in Council did not transfer any portion of the appropriation or budget

actual expenses that related to the Department of Energy's administrative support for the Authority. For the year ended March 31, 1999, the Alberta Science and Research Authority's budget and expenses recorded in these financial statements are overstated by \$1,480,000 and \$1,360,000 respectively.

Also, the Alberta Science and Research Authority is required to follow the corporate government accounting policies and reporting practices as disclosed in Note 3. These accounting policies have been established by Alberta Treasury and are consistent across ministries. With certain exceptions, the basis of accounting is in accordance with generally accepted accounting principles. My reservation of opinion in this auditor's report identifies two exception from generally accepted accounting principles that arise from following the accounting policies established by Alberta Treasury.

Pension obligations

Obligations to pension plans for current and former employees of the Authority have not been recognized as a liability in the accompanying statement of assets and liabilities and consequently the annual change in the liability has not been recognized in the statement of revenues and expenses. In my view, on a basis of allocation similar to that used for Provincial agencies, an amount of approximately \$76,000 due to pension plans at March 31, 1999, in the Authority's capacity as employer, and which is reflected in the financial statements of the Department of Treasury, should be recognized as a liability in these financial statements. The effect of not recognizing the annual change in the liability is to overstate the Authority's expenses for the year ended March 31, 1999, by \$36,000.

Excluded direct costs

Accommodation and certain other administration costs incurred in the operation of the Authority have not been included in expenses. These costs, estimated at \$71,000, are recorded by the departments that paid the expenses on behalf of the Authority.

In my opinion, except for the effect of the matters discussed in the preceding section, these financial statements present fairly, in all material respects, the financial position of the Authority as at March 31, 1999 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles.

Original signed by
Peter Valentine, FCA
Auditor General
Edmonton, Alberta
May 21, 1999

ALBERTA SCIENCE AND RESEARCH AUTHORITY
STATEMENT OF OPERATIONS
FOR THE YEAR ENDED MARCH 31, 1999

(In thousands)

	1999	1998
Budget	Actual	Actual
(Schedule 1)		
Revenue		
Other revenue	\$-	\$3
Expenses		
Voted (Schedules 2 and 3):		
Minister's Office	250	224
Operating expenses	2,952	1,516
Assistance to Alberta Research Council	25,363	23,506
Assistance to Science & Research Fund	16,500	5,000
	45,065	30,246
Valuation adjustments:		
Provision for vacation pay	-	17
	45,065	30,263
Net operating results	\$(45,065)	\$(30,260)

The accompanying notes and schedules are part of these financial statements.

ALBERTA SCIENCE AND RESEARCH AUTHORITY
STATEMENT OF CHANGES IN FINANCIAL POSITION
FOR THE YEAR ENDED MARCH 31, 1999

(In thousands)

	1999	1998
Actual	Actual	
Operating transactions:		
Net operating results	\$(45,296)	\$(30,260)
Decrease (increase) in accounts receivable	(11)	(5)
Decrease (increase) in advances	1	2
Increase (decrease) in accounts payable	(68)	636
Net cash used by operations	(45,374)	(29,627)
Financing transactions:		
Net transfer from general revenues	45,396	29,627
Net cash provided	22	-
Cash at beginning of year	-	-
Cash at end of year	\$22	\$-

The accompanying notes and schedules are part of these financial statements.

ALBERTA SCIENCE AND RESEARCH AUTHORITY
STATEMENT OF FINANCIAL POSITION
AS AT MARCH 31, 1999
(In thousands)

	1999	1998
Assets:		
Financial Assets:		
Cash	\$22	\$-
Accounts receivable	16	5
Advances	3	4
	41	9
Liabilities:		
Accounts payable (Note 5)	743	811
Net Liabilities	<u>\$(702)</u>	<u>\$(802)</u>
Net liabilities at beginning of year	(802)	(169)
Net operating results	(45,296)	(30,260)
Net transfer from general revenues	45,396	29,627
Net liabilities at end of year	<u>\$(702)</u>	<u>\$(802)</u>

The accompanying notes and schedules are part of these financial statements.

ALBERTA SCIENCE AND RESEARCH AUTHORITY
NOTES TO THE FINANCIAL STATEMENTS
MARCH 31, 1999

Note 1 Authority

The Alberta Science and Research Authority operates under the authority of the Government Organization *Act*, Statutes of Alberta.

The Science and Research Authority *Act* was proclaimed into force on September 15, 1995.

Note 2 Purpose

The purpose of the Alberta Science and Research Authority (the Authority) is to enhance the contribution of science and research to the sustainable prosperity and quality of life of all Albertans.

The strategic intent of the Authority is to increase the value of socio-economic benefits to Alberta from science and research investments in Alberta.

Note 3 Summary of Significant Accounting Policies and Reporting Practices

These financial statements are prepared in accordance with the following accounting policies that have been established by government for all departments, including the Authority. The recommendations of the Public Sector Accounting Board of the Canadian Institute of Chartered Accountants are the primary source for the disclosed basis of accounting. Recommendations of the Accounting Standards Board of the Canadian Institute of Chartered Accountants, other authoritative pronouncements, accounting literature and

published financial statements relating to either the public sector or analogous situations in the private sector are used to supplement the recommendations of the Public Sector Accounting Board where it is considered appropriate.

(a) Reporting entity

The reporting entity is the Authority, which is part of the Ministry of Science, Research and Information Technology and for which the Minister responsible for Science, Research and Information Technology is accountable. This reporting entity includes the activities of the Minister's Office. Other entities reporting to the Minister are the Alberta Research Council, the Science and Research Fund and Alberta Oil Sands Technology and Research Authority - Oil Sands Technology and Research Fund. The activities of these three organizations are not included in these financial statements.

Since significant financial transactions of the Ministry are reported outside the Authority's financial statements, the Ministry consolidated financial statements provide a more comprehensive accounting of the financial position and results of the Ministry's operations. The Ministry Annual Report provides a more complete picture of the responsibilities for which the Minister is accountable.

All departments of the Government of Alberta, including the Authority, operate within the General Revenue Fund (the Fund). The Fund is administered by the Provincial Treasurer. All cash receipts of departments, including the Authority, are deposited into the Fund and all cash disbursements made by the departments, including the Authority, are paid from the Fund. Net transfer to/from General Revenues is the difference between all cash receipts and all cash disbursements made.

(b) Basis of financial reporting

Revenues

All revenue is reported on the accrual method of accounting.

Expenses

Expenses represent the costs of resources consumed during the year on the Authority's operations.

Pension costs included in these statements comprise the cost of employer contributions for current service of employees during the year and additional employer contributions for employees' service relating to prior years.

Certain expenses, primarily for office space, legal advice, and banking services, incurred on behalf of the Authority by other Ministries are not reflected in the Statement of Operations.

Valuation Adjustments

Valuation adjustments represent the change in management's estimate of future payments arising from obligations relating to employee vacations.

Assets

Financial assets of the Authority are limited to financial claims, such as advances to and receivable from other organizations, employees and other individuals. The fair values of the financial assets are estimated to approximate their book values. Fair value is the amount of consideration agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act.

Accounts receivable are non-interest bearing and unsecured.

Advances represent amounts provided to department employees for travel expenses and are non-interest bearing and recoverable on demand.

Liabilities

Liabilities include all financial claims payable by the Authority at fiscal year end, except long term disability benefits and certain pension benefits, which are reflected in the financial statements of Treasury Department on behalf of all departments. The fair value of accounts payable is estimated to approximate its book value.

Net Liabilities

Net liabilities represents the difference between the value of assets held by the Authority and its liabilities.

Note 4 Changes in Operations and Programs

On February 3, 1999, responsibility for energy research and technology was transferred from the Department of Energy pursuant to Section 16 of the Government Organization Act, which transferred responsibility for the Oil Sands Technology and Research Authority Act. In accordance with the government's accounting policies, this transfer is recorded in these financial statements effective April 1, 1998. Comparative figures have not been restated. The impact of the transfer on the 1998 actual amounts, would have been an increase in the Authority's operating expenses by \$1,528,000 to \$3,044,000 resulting in a decrease in the net operating results to \$(31,788,000).

Note 5 Accounts Payable

	(In thousands)	
	1999	1998
Accounts payable	\$ 157	\$ 117
Accrued liabilities:		
- Vacation	330	46
- Other	256	648
	<u>\$ 743</u>	<u>\$ 811</u>

Note 6 Related Party Transactions

The Authority paid grants totaling \$25,363,000 (1998 - \$23,506,000) to the Alberta Research Council and \$16,500,000 (1998 - \$5,000,000) to the Science and Research Fund. In addition, the Authority paid \$91,000 (1998 - \$217,337) to various other Government of Alberta departments, agencies or funds for supplies and/or services during the fiscal year. Accommodations, legal, telecommunications, personnel, and certain financial costs were provided to the Authority by other government organizations at no cost. The estimated value of accommodation is \$71,000 (1998 - \$77,000). There were no receivables or payables to related parties outstanding at year end.

The Authority and its employees paid certain taxes and fees set by regulation for permits, licenses, and other rights. These amounts were included in the normal course of business and reflect charges applicable to all users.

Note 7 Uncertainty Due to the Year 2000

The year 2000 issue is the result of some computer systems using two digits rather than four to define the applicable year. Government computer systems that have date sensitive software may recognize a date using "00" as the year 1900 rather than the year 2000, which could result in miscalculations or system failures. In addition, similar problems may arise in some systems if certain dates in 1999 are not recognized as a valid date or are recognized to represent something other than a date. The effects of the year 2000 issue may be experienced before, on, or after January 1, 2000. If not addressed, the effect on operations and financial reporting may range from minor errors to significant systems failure that could affect the ability to conduct some government operations. Despite the government's efforts to address

this issue, it is not possible to be certain that all aspects of the year 2000 issue affecting the government, including those related to the efforts of customers, suppliers and other third parties, will be fully resolved.

Note 8 Comparative Figures

Certain 1998 figures have been reclassified to conform to the 1999 presentation.

Due from General Revenues reported in 1998 has been reclassified to net liabilities in 1999, with the exception of \$4,000 relating to GST receivables which has been reclassified as accounts receivable. The change in net liabilities reported on the Statement of Financial Position includes net transfer from General Revenues. As a result, the net contribution from General Revenues, as previously reported, is no longer required.

Note 9 Subsequent Events

The Alberta Science, Research and Technology *Act* comes into effect on April 1, 1999. The *Act* will continue the Alberta Science and Research Authority as the Alberta Science, Research and Technology Authority. The *Act* will dissolve the Alberta Science and Research Authority and the Science and Research Fund and their assets and liabilities will be vested in the new Authority. As a result, this will be the last year for which financial statements of the Science and Research Authority will be prepared.

In addition, effective April 1, 1999, the Lieutenant Governor in Council approved the incorporation of the Alberta Research Council Inc. as a wholly-owned subsidiary corporation of the Alberta Science, Research and Technology Authority.

Note 10 Salaries and Benefits Disclosure

	(In thousands)			
	1999		1998	
	Salary 1	Benefits and Allowances 2	Total	Total
Seinior Official				
President, Science and Research	\$143,425	\$15,651	\$159,076	\$123,509

1. Salary includes regular base pay, bonuses, overtime, lump sum payments, and any other direct cash remuneration.
2. Benefits and allowances includes the employer's share of all employee benefits such as pension, health care, dental coverage, group life insurance, short and long-term disability plans, professional membership, tuition, and vacation payouts.
3. The President is provided with an automobile. The value of this benefit is not included in benefits and allowances.

Note 11 Approval of Financial Statements

The financial statements were approved by the Senior Financial Officer and the President of the Authority.

**ALBERTA SCIENCE AND RESEARCH AUTHORITY
SCHEDULES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED MARCH 31, 1999**

**Schedule 1
Budget**

	(In thousands)				
	1999				
	Estimates (c)	Transfer of Respon- sibility (d)	Budget	"Voted Supple- mentary (c)"	Authorized Budget
Revenues					
Other revenue	\$-	\$-	\$-	\$-	\$-
Expenses					
Voted (a) :					
Minister's office	\$250	\$-	\$250	\$3	\$253
Alberta Science and Research Authority	1,532	1,420	2,952	95	3,047
Assistance to the Alberta Research Council	25,363	-	25,363	-	25,363
Assistance to the Science and Research Fund	16,500	-	16,500	-	16,500
	43,645	1,420	45,065	98	45,163
Valuation adjustments (b) :					
Provision for vacation pay	-	-	-	-	-
	\$43,645	\$1,420	\$45,065	\$98	\$45,163

- (a) In the event that actual voted expenses exceed the authorized budget, the difference which is known as an encumbrance, reduces the budgeted amount in the subsequent year.
- (b) In the event that actual statutory expenses and actual valuation adjustments exceed the authorized budget, there is no impact to budgeted amounts in the subsequent year.
- (c) Government Estimates were approved on March 26, 1998 and Supplementary Estimates were approved on March 8, 1999. The Supplementary Estimates included \$27,400,000 for an achievement bonus program for government employees. These funds were placed temporarily in a central pool administered by Personnel Administration Office and then distributed to ministries. The amount distributed to the Minister's Office and the Authority was \$98,000.
- (d) Responsibility for Oil Sands Technology and Research transferred from the Ministry of Energy effective February 3, 1999. This transfer is recorded in the financial statements effective April 1, 1998 in accordance with government accounting policies.

Schedule 2

Voted Expenses by Program Detail

	(In thousands)				
	1999				
	Budget	Voted Supple- mentary 1	Authorized Budget	Actual Expenses	Unexpended (Over Expended)
Science, Research and Information Technology Minister's Office	\$250	\$3	\$253	\$254	\$(1)
Alberta Science and Research Authority	2,952	95	3,047	2,912	135
Assistance to Alberta Research Council	25,363	-	25,363	25,363	-
Assistance to Science and Research Fund	16,500	-	16,500	16,500	-
	<u>\$45,065</u>	<u>\$98</u>	<u>\$45,163</u>	<u>\$45,029</u>	<u>\$134</u>

Schedule 3

Expenses Detailed by Object

	(In thousands)		
	1999		
	Budget	Actual	Actual
Voted:			
Grants:			
Alberta Research Council	\$25,363	\$25,363	\$23,506
Science and Research Fund	16,500	16,500	5,000
	<u>41,863</u>	<u>41,863</u>	<u>28,506</u>
Salaries, wages and employee benefits	1,887	1,981	733
Supplies and services	1,270	1,139	962
Others	45	46	45
	<u>\$45,065</u>	<u>\$45,029</u>	<u>\$30,246</u>

SCIENCE AND RESEARCH FUND

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MARCH 31, 1999

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Statement of Operations

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Statement of Financial Position

Notes to the Financial Statements

Schedule of Grants for Strategic Research Initiatives

AUDITOR'S REPORT

To the Minister of Innovation and Science

I have audited the statement of financial position of the Science and Research Fund as at March 31, 1999 and the statements of operations and changes in financial position for the year then ended. These financial statements are the responsibility of the Fund's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

The Science and Research Fund is required to follow the corporate government accounting policies and reporting practices as disclosed in Note 3. These accounting policies have been established by Alberta Treasury and are consistent across ministries. With certain exceptions, the basis of accounting is in accordance with generally accepted accounting principles. My reservation of opinion in this auditor's report identifies the exception from generally accepted accounting principles that arises from following the accounting policies established by Alberta Treasury.

The following accounting policy is an exception from generally accepted accounting principles:

Excluded Direct Costs

Accommodation and certain other administration costs incurred in the operation of the Fund have not been included in expenses. These costs are recorded by the departments that paid the expenses on behalf of the Fund.

In my opinion, except for the matter discussed in the preceding section, these financial statements present fairly, in all material respects, the financial position of the Fund as at March 31, 1999 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles.

Original Signed by
Peter Valentine, FCA
Auditor General

Edmonton, Alberta
May 21, 1999

**SCIENCE AND RESEARCH FUND
STATEMENT OF OPERATIONS
FOR THE YEAR ENDED MARCH 31, 1999**

(In thousands)

	1999		1998
	Budget	Actual	Actual
Revenues:			
Transfer from Alberta Science and Research Authority	\$16,500	\$16,500	\$5,000
Investment income	-	749	74
	16,500	17,249	5,074
Expenses:			
Grants for strategic research initiatives (Schedule 1)	16,500	16,121	3,344
Administration	-	175	-
	16,500	16,296	3,344
Net operating results	\$-	\$953	\$1,730

The accompanying notes and schedule are part of these financial statements.

**SCIENCE AND RESEARCH FUND
STATEMENT OF CHANGES IN FINANCIAL POSITION
FOR THE YEAR ENDED MARCH 31, 1999**

(In thousands)

	1999	1998
	Actual	Actual
Operating transactions:		
Net operating results	\$953	\$1,730
Increase in accounts payable	868	3,344
Net cash provided	1,821	5,074
Cash at beginning of year	5,074	-
Cash at end of year	\$6,895	\$5,074

The accompanying notes and schedule are part of these financial statements.

**SCIENCE AND RESEARCH FUND
STATEMENT OF FINANCIAL POSITION
AS AT MARCH 31, 1999**

(In thousands)

	1999	1998
Assets:		
Cash (Note 4)	\$6,895	\$5,074
Liabilities:		
Accounts payable	4,212	3,344
Net assets	\$2,683	\$1,730
Net assets at beginning of year	1,730	-
Net operating results	953	1,730
Net assets at end of year	\$2,683	\$1,730

The accompanying notes are part of these financial statements.

SCIENCE AND RESEARCH FUND

NOTES TO THE FINANCIAL STATEMENTS

MARCH 31, 1999

Note 1 Authority

The Science and Research Fund was established under The Science and Research Authority Act, Statutes of Alberta 1995, Chapter 5-5.5. The Fund commenced operations on April 1, 1997.

Note 2 Purpose

The purpose of the Science and Research Fund (the Fund) is to support the initiation of strategically important science and research initiatives that will contribute to prosperity and quality of life for Albertans.

Note 3 Summary of Significant Accounting Policies and Reporting Practices

These financial statements are prepared in accordance with the following accounting policies that have been established by government for all departments, including the Authority. The recommendations of the Public Sector Accounting Board of the Canadian Institute of Chartered Accountants are the primary source for the disclosed basis of accounting. Recommendations of the Accounting Standards Board of the Canadian Institute of Chartered Accountants, other authoritative pronouncements, accounting literature and published financial statements relating to either the public sector or analogous situations in the private sector are used to supplement the recommendations of the Public Sector Accounting Board where it is considered appropriate.

(a) Reporting entity

The reporting entity is the Fund, which is part of the Ministry of Science, Research and Information Technology and for which the Minister responsible for Science,

Research and Information Technology is accountable. Other entities reporting to the Minister are the Alberta Research Council, the Alberta Science and Research Authority and Alberta Oil Sands Technology and Research Authority - Oil Sands Technology and Research Fund. The activities of these three organizations are not included in these financial statements.

Since significant financial transactions of the Ministry are reported outside the Fund's financial statements, the Ministry consolidated financial statements provide a more comprehensive accounting of the financial position and results of the Ministry's operations. The Ministry Annual Report provides a more complete picture of the responsibilities for which the Minister is accountable.

(b) Basis of financial reporting

Revenues

All revenue is reported on the accrual method of accounting.

Transfers from the Alberta Science and Research Authority are subject to the approval of annual appropriations and are recorded in the year for which they are approved.

Expenses

Expenses includes grants authorized by the regulations as set out in the Science and Research Authority Act. Grants are recorded as expenditures when authorized and when all eligibility conditions have been satisfied.

Direct administration costs consisting of manpower and supplies and services are charged to the Fund.

Liabilities

Liabilities include all financial claims payable by the Fund at fiscal year end. The fair values of the liabilities are estimated to approximate their book values. Fair value is the amount of consideration agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act.

Note 4 Cash

Cash consists of deposits in the Consolidated Cash Investment Trust Fund of the Province of Alberta. The Trust Fund is invested primarily in short-term and mid-term fixed income securities with a maximum term to maturity of five years. The securities are either issued or guaranteed by the Canadian federal and provincial governments, deposits given by or guaranteed by chartered banks, or short-term investment-grade-quality notes of Canadian corporations. Due to the short-term nature of the Fund's investments, the carrying value approximates fair value. Interest is earned on the daily cash balance at the average rate of earnings of the Trust Fund, which varies depending on prevailing market interest rates.

Note 5 Budget

The budget used in the Statement of Operations is derived from the 1998-99 Government Estimates.

Note 6 Related Party Transactions

The Fund received a transfer of \$16,500,000 (1998 - \$5,000,000) from the Alberta Science and Research Authority pursuant to the Science and Research Authority *Act*.

A grant of \$345,000 was paid to the Alberta Research Council. There were no receivables or payables to related parties outstanding at year end. Certain accommodation and other administrative costs were provided to the Fund by the Alberta Science and Research Authority and other government organizations at no cost.

Note 7 Subsequent Events

The Alberta Science, Research and Technology *Act* comes into effect on April 1, 1999. The *Act* will continue the Alberta Science and Research Authority as the Alberta Science, Research and Technology Authority. The *Act* will dissolve the Alberta Science and Research Authority and the Science and Research Fund, and their assets and liabilities will be vested in the new Authority. As a result, this will be the last year for which financial statements for the Science and Research Fund will be prepared.

In addition, effective April 1, 1999, the Lieutenant Governor in Council approved the incorporation of the Alberta Research Council Inc. as a wholly-owned subsidiary corporation of the Alberta Science, Research and Technology Authority.

Note 8 Comparative Figures

Certain 1998 figures have been reclassified to conform to the 1999 presentation.

Note 9 Approval of Financial Statements

The financial statements were approved by the Senior Financial Officer and the President of the Alberta Science and Research Authority.

SCIENCE AND RESEARCH FUND
SCHEDULE OF GRANTS FOR STRATEGIC RESEARCH INITIATIVES
FOR THE YEAR ENDED MARCH 31, 1999
(In thousand)

	1999	1998
Program Areas		
Information and communications technology	\$8,883	\$1,112
Biomedical research	2,000	1,972
Commercialization	1,500	-
Applied mathematical research	900	110
Biotechnology	740	150
Transportation engineering and research	600	-
Forestry research	495	-
Health research	375	-
Natural resources research	346	-
Science awareness and promotion	242	-
Other	40	-
	<u>\$16,121</u>	<u>\$3,344</u>

ALBERTA RESEARCH COUNCIL

FINANCIAL STATEMENTS

MARCH 31, 1999

Management's Responsibility for Financial Reporting

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MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

The accompanying financial statements and other financial information contained in this annual report are the responsibility of management and have been approved by the Board of Directors.

The financial statements have been prepared in accordance with generally accepted accounting principles, using management's estimates and judgments where appropriate. Financial and operating data elsewhere in the annual report are consistent with information contained in the financial statements.

To discharge its responsibility for the integrity and objectivity of financial reporting, management maintains a system of accounting and administrative controls. This system is designed to provide management with reasonable assurance that transactions are properly authorized, assets are safeguarded against loss from unauthorized use or disposition, and that financial records are properly maintained to provide accurate and reliable financial statements.

The Board of Directors discharges its responsibility for the financial statements principally through its audit committee, which consists of four directors who are not officers or employees of the corporation.

The financial statements have been audited by the Auditor General of Alberta, who had full and free access to the audit committee. The auditor's report follows.

Original signed by

John R. McDougall
Managing Director and
Chief Executive Officer

Keith D. Salmon, C.A.
Chief Financial Officer
and Corporate Secretary

AUDITOR'S REPORT

To the Board of Directors of the Alberta Research Council Inc.

I have audited the balance sheet of the Alberta Research Council Inc. (formerly the Alberta Research Council) as at March 31, 1999 and the statements of revenues and expenditure, operating equity and cash flows for the year then ended. These financial statements are the responsibility of the Research Council's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements.

An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In my opinion, these financial statements present fairly, in all material respects, the financial position of the Research Council as at March 31, 1999 and the results of its operations and cash flows for the year then ended in accordance with generally accepted accounting principles.

Original signed by
Peter Valentine, FCA
Auditor General
Edmonton, Alberta
April 30, 1999

ALBERTA RESEARCH COUNCIL
BALANCE SHEET
AS AT MARCH 31, 1999
(In thousands)

	1999	1998
Assets		
Current:		
Cash and cash equivalents	\$13,273	\$10,350
Accounts receivable (Note 3)	6,173	6,097
Accrued income receivable	1,469	2,179
Prepaid expenses	304	206
	<u>21,219</u>	<u>18,832</u>
Capital:		
Assets (Note 4)	10,727	10,934
	<u>\$31,946</u>	<u>\$29,766</u>
Liabilities and Equity		
Current:		
Accounts payable and accrued liabilities	10,578	8,930
Unearned contract revenue	1,419	1,169
	<u>11,997</u>	<u>10,099</u>
Long-term:		
Pension liability (Note 5)	1,204	1,679
Equity:		
Operating	18,745	17,988
	<u>\$31,946</u>	<u>\$29,766</u>

The accompanying notes are part of these financial statements.

**ALBERTA RESEARCH COUNCIL STATEMENT OF REVENUE AND
EXPENDITURE AND OPERATING EQUITY
FOR THE YEAR ENDED MARCH 31, 1999**

(In thousands)

	1999		1998
	Budget	Actual	Actual
	(Note 13)		
Revenue			
Investment from the Province of Alberta:			
General revenues (Note 9)	\$25,363	\$25,363	\$23,506
Indirect revenues (Note 9)	-	9,591	9,759
Contract revenue:			
Commercial	19,974	17,878	15,610
Alberta government departments and agencies	7,759	7,623	8,196
Royalties and licensing fees	1,012	759	724
Total external contract revenue	54,108	61,214	57,795
Expenditure			
Accommodation costs (Note 9)	-	9,591	9,759
Amortization	2,214	2,610	2,210
Computing supplies and services	2,138	2,214	2,076
Insurance	225	249	220
Legal and patent	860	1,034	907
Maintenance and rental	689	393	446
Material and supplies	5,830	5,455	5,126
Other expenses	3,012	2,131	1,546
Professional, technical and labour services	3,932	4,739	4,092
Salaries, wages and benefits	32,355	30,016	28,602
Telephone	600	509	601
Travel and hospitality	1,867	1,516	1,516
Write-off of capital assets (Note 4)	-	-	456
	53,722	60,457	57,557
Net revenue for the year	386	757	238
Operating equity at beginning of year	17,988	17,988	17,750
Operating equity at end of year	\$18,374	\$18,745	\$17,988

**ALBERTA RESEARCH COUNCIL
STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED MARCH 31, 1999**

(In thousands)

	1999	1998
Operating activities:		
Net revenue for the year	\$757	\$238
Items not affecting cash:		
Indirect revenue	(9,591)	(9,759)
Accommodation costs	9,591	9,759
Amortization	2,610	2,210
Write off of capital assets	-	456
Net change in non-cash balances (Note 8)	1,959	(3,330)
Net cash provided by (used by) operating activities	5,326	(426)
Investing activities:		
Capital asset additions	(2,426)	(2,401)
Proceeds on disposal of capital assets	23	50
Net cash used by investing activities	(2,403)	(2,351)
Increase (decrease) in cash	2,923	(2,777)
Cash and cash equivalents at beginning of year	10,350	13,127
Cash and cash equivalents at end of year	\$13,273	\$10,350

ALBERTA RESEARCH COUNCIL

NOTES TO THE FINANCIAL STATEMENTS

MARCH 31, 1999

Note 1 Authority and Purpose

During the year, the Alberta Research Council operated under the authority of the Alberta Research Council Act, Chapter A-35.1, Statutes of Alberta 1981. The Alberta Research Council is a Provincial corporation owned by the Government of Alberta and is exempt from income tax.

The Alberta Science, Research and Technology Act was passed on March 26, 1998. The Act was proclaimed effective on April 1, 1999. The Act dissolves the Alberta Science and Research Authority and the Science and Research Fund and their assets and liabilities are vested in the new Authority.

The Alberta Research Council Act was repealed April 1, 1999. The Alberta Research Council Inc. is incorporated under the business Corporations Act (Alberta) and assumes the assets and undertakings of the Alberta Research Council. The Alberta Research Council Inc. ("Research Council") will continue as a wholly owned subsidiary of the Alberta Science, Research and Technology Authority.

The Authority and its wholly owned subsidiaries are exempt from assessment or taxation for municipal or provincial purposes.

In partnership with global leaders, the Research Council advances the economy and well-being of Alberta by providing technology and innovation to meet current and emerging needs of industry and government.

Note 2 Summary of Significant Accounting Policies and Reporting Practices

The financial statements have been prepared by management in accordance with accounting principles generally accepted in Canada. The precise determination of many assets and liabilities is dependent upon future events. Accordingly, the preparation of financial statements for a reporting period necessarily involves the use of estimates and approximations which have been made using careful judgement. Actual results could differ from those estimates. The financial statements have, in management's opinion, been properly prepared within reasonable limits of materiality and within the framework of the accounting policies summarized below.

(a) Amortization

Capital assets are amortized on a straight-line basis over their estimated useful lives using the following annual rates:

Leasehold improvements	Twenty-five years
Equipment	Three to twenty years
Furniture and fixtures	Five years
Computer equipment and software	Three years

(b) Patents and other Intangible Assets

Expenditures for patents owned by the Research Council as a result of research activity are not capitalized due to the uncertain value of benefits which may accrue to the Research Council.

Expenditures on the acquisition or development of other intangible assets including intellectual capital are not capitalized as there currently

there is not an acceptable methodology for measuring the value of future benefits accruing to the Research Council.

(c) Revenue Recognition

Provincial investment funds, general revenues, are recognized as revenue in the year approved. Services and materials that are contributed to the Research Council are recognized as indirect revenues in the year they are received, provided that the fair value of the services and materials can be reasonably estimated and the materials and services are used in the normal course of operations.

Contract revenue is recognized as costs are incurred, up to the contract maximum and in accordance with contracted cost-sharing ratios. The Research Council makes full provision for all known or estimated losses on uncompleted contracts as soon as they can reasonably be estimated.

Royalties and licensing fee revenue is recognized when the amount can be

reasonably estimated and there is reasonable assurance of collectability of proceeds.

(d) Pension

The Alberta government required the Research Council to record unfunded pension liabilities relating to Research Council employees who are members of the Public Service Pension and the Management Employees Pension Plan. Pension costs comprise the cost of pension obligations earned by employees during the year, interest on the Research Council's share of the unfunded pension liabilities, the amortization of gains or losses that relate to the long-term over the expected average remaining service life of the employee group, the immediate recognition of gains and losses for which there is reasonable assurance regarding measurement and realization, and the change in Research Council's share of the unfunded pension liabilities. The net expense recovery is included as part of salaries, wages and benefits.

Note 3 Accounts Receivable

Commercial
Alberta government departments and agencies

(In thousands)	
1999	1998
\$ 3,781	\$ 2,929
2,392	3,168
<u>\$ 6,173</u>	<u>\$ 6,097</u>

Note 4 Capital Assets

Leasehold improvements
Equipment
Furniture and fixtures
Computer equipment and software

(In thousands)			
	1999	1998	
Cost	Accumulated	Net	Net
Amortization			
\$5,916	\$2,070	\$3,846	\$4,094
26,681	20,193	6,488	6,210
177	152	25	42
3,689	3,321	368	588
<u>\$36,463</u>	<u>\$25,736</u>	<u>\$10,727</u>	<u>\$10,934</u>

In the prior year, the Research Council wrote off \$456,501 of capital assets which were no longer in use. There were no additional write-offs of capital assets in the current year.

Note 5 Pension Liability

The Research Council participates with other employers in the Public Service and Management Employees pension plans. These plans provide pensions for the Research Council's employees based on years of service and earnings.

The Research Council had an unfunded pension liability for each plan as at March 31 which was estimated as follows:

	(In thousands)	
	1999	1998
Public Service	\$ 730	\$ 732
Management Employees	474	947
	<u>\$1,204</u>	<u>\$1,679</u>

The total unfunded pension liability for each plan as at March 31, 1999 was determined by actuarial valuations, as at December 31, 1997 for the Public Service plan and as at December 31, 1997 for the Management Employees plan, both extrapolated to March 31, 1999. The 1998 comparative figures were based upon actuarial valuations as at December 31, 1995 for the Public Service Plan and as at December 31, 1996 for the Management Employees plan, both extrapolated to March 31, 1998.

The actuarial valuation was determined using the projected benefit method prorated on service. Assumptions used in the valuation are based on the Pension Board's best estimate of future events. The plans' future experience will inevitably vary, perhaps significantly, from the assumptions. Any differences between the actuarial assumptions and future experience will emerge as gains or losses in future valuations. Gains and losses which relate to the long-term are amortized over the expected average remaining service life of the employee group; gains and losses for which there is

reasonable assurance regarding their measurement and realization are recognized in income immediately.

The Public Section Pension Plans Act specifies the basis to determine the amount of the total unfunded liability for each plan which will be funded by employers. The Research Council's portion of those employers' liabilities was based on the Research Council's percentage of the total pensionable payroll of all employers.

Note 6 Contingencies

- (a) During 1999, the Research Council was made aware of a \$4,079,174 claim naming the Research Council as the defendant. The claim relates to contamination of petroleum produced from certain oil wells and arises out of a joint venture agreement to develop drilling fluid that would act as fracturing agent. A previous claim naming the Research Council as one of the defendants related to the same event was settled in the previous year. This matter has been referred to the insurers and the likelihood of loss or the amount of loss to the Research Council is not determinable at this time however, management has stated that any losses would be fully recovered by insurance. Any settlement that may occur would be accounted for as a charge against current year's earning at the time of settlement.
- (b) During 1999, a legal action relating to employee severance, claiming an amount of \$135,000, was commenced against the Research Council. Management believes that it has substantial defences to the claim asserted; however, the likelihood of loss or the amount of the loss is not determinable at this time. Any settlement that may occur would be accounted for as a charge against current year's earning at the time of settlement.

Note 7 Obligation Under Operating Leases

Future minimum lease payments requirements for office equipment and vehicles over the next five years are as follows:

	(In thousands)
Year ending March 31, 2000	\$ 111
2001	86
2002	57
2003	43
2003	8
	<u>\$ 305</u>

Note 8 Net Change in Non-cash Balances

	(In thousands)	
	1999	1998
Accounts receivable	\$(76)	\$(1,075)
Accrued income receivable	710	(1,309)
Prepaid expenses	(98)	(31)
Accounts payable and accrued liabilities	1,648	(628)
Unearned contract revenue	250	621
Pension liability	(475)	(908)
	<u>\$1,959</u>	<u>\$(3,330)</u>

Note 9 Related Party Transactions

Accommodation and Amortization Expenditures

The premises occupied by the Research Council, as well as some office furniture and tenant improvements, have been provided by the Province of Alberta at no cost.

During the year, the Research Council changed its accounting policy with respect to recording related party transactions. In prior years, the Research Council followed the Government of Alberta's policy of not recording accommodation and certain other administrative costs provided to it by other government entities at no cost. In the current year, the Research Council changed its policy such that the value of support provided by the Department of Public Works, Supply and Services and Alberta Environmental Protection is recorded at its carrying value in the financial statements. The change in accounting policy has been applied retroactively and the comparative figures of the prior period have been restated.

The effect of the change on current and prior period is as follows:

	(In thousands)	
	1999	1998
Indirect revenue	\$ 9,591	\$ 9,759
Accommodation expenditure:		
Building maintenance	4,511	4,139
Grants in lieu of taxes	2,559	2,688
Lease costs	155	396
Non-capital project expenditures	650	1,118
Capital amortization	1,716	1,418
	<u>\$ 9,591</u>	<u>\$ 9,759</u>

During the year, the Research Council received \$25,363,000 (1998 - \$23,506,000) in general revenues from the Alberta Science and Research Authority.

During the year, contract revenue from Alberta government departments and agencies was \$7,622,855 (1998 - \$8,196,496).

Note 10 Salaries, Wages and Benefits

	(In thousands)			
	Salary (1)	Benefits and (2) Allowances"	Total	Total
	\$	\$	\$	\$
Chairman of the Board	15	-	15	14
Board members	5	-	5	7
Chief Executive Officer	116	36	152	146
Executive/Vice-Presidents				
Chief Financial Officer	99	20	119	123
Vice-President, R & D	109	19	128	135
Vice-President, Marketing	-	-	-	114
Vice-President, Planning & Development	99	17	116	119
Director, Technology Commercialization office	85	13	98	100

(1) Salary includes regular pay, bonuses and lump sum payments.

(2) Benefits and allowances includes the employer's share of the cost of pension, Canada Pension Plan, Employment Insurance, dental, major medical, basic life insurance, short and long-term disability, employee allocation accounts and vacation accrual. It also includes car allowance, payments made in lieu of benefits, membership fees and living allowance.

Note 11 Financial Instruments

The fair values of cash, accounts receivable, accrued income receivable, and accounts payable and accrued liabilities approximate their carrying value.

In addition, at March 31, 1999, the Research Council owns the following:

- (a) options, which expire May 5, 2001, to acquire 211,400 (1998 - 272,400) common shares of a public company exercisable at \$1 per common share. The market value of this public company's common shares at March 31, 1999 was \$2.32 (1998 - \$10.15) per share. During the year, the Research Council agreed to share royalty and licensing revenue related to Chembiomed Ltd. technology. One-half of future revenues from identified licensing agreements are designated for collaborative carbohydrate research projects by the Research Council and the University of Alberta.

One-half of the exercised options to acquire the above noted 211,400 common shares are designated for collaborative carbohydrate research projects, as part of this agreement.

- (b) option, which expire March 31, 2003, to acquire 75,000 common shares of a public company exercisable at \$2 per common share. The market value of this public company's common shares at March 31, 1999 was \$4.65 (1998 - \$1.32) per share.
- (c) warrants, which expire June 30, 2002, to acquire 200,000 (1998 - nil) common shares of a public company exercisable at \$2 per common share. The market value of this public company's common shares at March 31, 1999 was \$0.40 per share.

- (d) 240,776 (1998 - nil) common shares of a non-publicly traded company. The market value of this company's common shares at March 31, 1999 is not reasonably determinable.
- (e) 400,000 (1998 - nil) common shares of a non-publicly traded company. The market value of this company's common shares at March 31, 1999 is not reasonably determinable.
- (f) 17,392 Class A voting common shares of a public company. The shares were received in 1998 as consideration for contract work provided by the Research Council to the company. These marketable securities were originally recorded at \$100,000 which represented the quoted market value of the shares at the time the contract work was completed. The marketable securities were revalued at \$26,088 (1998 - \$71,307) to reflect the realizable value at March 31, 1999.

These options, warrants and common shares which were originally acquired as part of the consideration for granting of various licenses, are recorded at nominal values, except otherwise noted.

The Research Council is subject to market risk with these stock options and warrants. As a result, the value of these financial instruments will fluctuate as a result of changes in market prices.

Note 12 Subsequent Event

- (a) On April 15, 1999 the Research Council entered into an agreement of "Principles Governing a Proposed Acquisition" with an arms-length third party research organization. Under the terms of the agreement the Research Council would acquire 100% of the share capital of the organization for no consideration. The agreement is subject to approval by the Board of Directors of the organization and Research Council, and the Province of Alberta. The total revenues of the organization as

at December 31, 1998 (its fiscal year end) were approximately \$6.1 million and the net assets were approximately \$216,000.

- (b) On April 21, 1999, an Order in Council was approved by the Province of Alberta resulting in the transfer of the management and control of Petroleum Recovery Institute, and its subsidiary PRI Solutions, Inc. to the Research Council. Petroleum Recovery Institute is a consortium-funded, research and technology development company supporting the needs of the oil industry. Petroleum Recovery Institute's technologies are focused on improved petroleum recovery from petroleum reservoirs. There was no consideration paid by Research Council on the transfer. Management estimates that revenues from the Petroleum Recovery Institute's operations for the fiscal year 2000 will be approximately \$2.0 million and net assets of approximately \$700,000.

Note 13 Budget

The 1999 budget was approved by the Board of Directors on March 17, 1998.

Note 14 Uncertainty due to the Year 2000 Issue

The Year 2000 Issue arises because many computerized systems use two digits rather than four to identify a year. Date-sensitive systems may recognize the year 2000 as 1900 or some other date, resulting in errors when information using year 2000 dates is processed. In addition, similar problems may arise in some systems which use certain dates in 1999 to represent something other than a date. The effects of the Year 2000 Issue may be experienced before, on, or after January 1, 2000, and, if not addressed, the impact on operations and financial reporting may range from minor errors to significant systems failure which could affect an entity's ability to conduct normal business operations. It is not possible to be certain that all aspects of

the Year 2000 Issue affecting the Research Council, including those related to the efforts of customers, suppliers, or other third parties, will be fully resolved.

The Research Council has implemented a policy that management believes will address the Year 2000 Issue.

Note 15 Approval of Financial Statements

These financial statements were reviewed by management and the audit committee, and recommended to the Board for approval.

SUPPLEMENTARY MINISTRY

FINANCIAL INFORMATION

MARCH 31, 1999

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ALBERTA HERITAGE FOUNDATION FOR MEDICAL RESEARCH

CONSOLIDATED FINANCIAL STATEMENTS

MARCH 31, 1999

Auditor's Report

Consolidated Statement of Financial Position

Consolidated Statement of Revenue and Expense

Consolidated Statement of Changes in Net Assets

Consolidated Statement of Cash Flows

Notes to the Consolidated Financial Statements

AUDITOR'S REPORT

To the Trustees of the Alberta Heritage Foundation for Medical Research.

I have audited the consolidated statement of financial position of the Alberta Heritage Foundation for Medical Research as at March 31, 1999 and the consolidated statements of revenue and expense, changes in net assets, and cash flows for the year then ended. These financial statements are the responsibility of the Foundation's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and

disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In my opinion, these financial statements present fairly, in all material respects, the financial position of the Foundation as at March 31, 1999 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles.

Original signed by
Peter Valentine, FCA
Auditor General
Edmonton, Alberta
June 25, 1999

ALBERTA HERITAGE FOUNDATION FOR MEDICAL RESEARCH
CONSOLIDATED STATEMENT OF FINANCIAL POSITION
MARCH 31, 1999
(thousands of dollars)

	1999	1998
ASSETS		
Cash	\$3,434	\$3,843
Restricted cash	5,649	6,212
Accounts receivable	22	19
Advances and prepaid expenses	40	45
Capital assets (Note 4)	586	737
Deferred pension costs (Note 5)	73	37
	<u>\$9,804</u>	<u>\$10,893</u>
LIABILITIES AND NET ASSETS		
Accounts payable and accrued liabilities	\$2,138	\$1,277
Accrued retirement allowance (Note 5)	184	134
Deferred lease inducement	40	58
Capital lease obligation (Note 6)	55	117
Deferred contributions (Note 7)	5,948	8,204
	<u>8,365</u>	<u>9,790</u>
Net assets (Note 8)	<u>1,439</u>	<u>1,103</u>
	<u><u>\$9,804</u></u>	<u><u>\$10,893</u></u>

The accompanying notes are part of these financial statements.

ALBERTA HERITAGE FOUNDATION FOR MEDICAL RESEARCH
CONSOLIDATED STATEMENT OF REVENUE AND EXPENSE
FOR THE YEAR ENDED MARCH 31, 1999

(thousands of dollars)

	Operations	Other Programs (Note 9)	Total	1998
Revenue				
Transfers from Endowment Fund (Note 3)	\$36,000	\$-	\$36,000	\$32,000
Amortization of deferred contributions (Note 7)	-	5,287	5,287	4,183
Donations (Note 9)	-	-	-	602
Interest	227	31	258	151
Recoveries on Technology Commercialization (Note 10)	12	-	12	13
Other	8	-	8	273
	<u>36,247</u>	<u>5,318</u>	<u>41,565</u>	<u>37,222</u>
Expenses				
Grants and awards				
Personnel	18,586	-	18,586	16,342
Training	5,649	-	5,649	6,066
Health research	3,377	-	3,377	1,785
Other	4,823	4,487	9,310	6,621
	<u>32,435</u>	<u>4,487</u>	<u>36,922</u>	<u>30,814</u>
Program Operation				
Advisory and peer review	385	222	607	472
SEARCH program	438	-	438	222
Other expenses	-	210	210	128
Research contracts	-	(2)	(2)	43
Other initiatives	35	-	35	13
	<u>858</u>	<u>430</u>	<u>1,288</u>	<u>878</u>
Administration				
Office administration	1,630	877	2,507	2,105
Communication and education	224	-	224	337
Planning and governance	288	-	288	166
	<u>2,142</u>	<u>877</u>	<u>3,019</u>	<u>2,608</u>
	<u>35,435</u>	<u>5,794</u>	<u>41,229</u>	<u>34,300</u>
Excess (deficiency) of revenue over expense	<u>\$812</u>	<u>\$(476)</u>	<u>\$336</u>	<u>\$2,922</u>

ALBERTA HERITAGE FOUNDATION FOR MEDICAL RESEARCH
CONSOLIDATED STATEMENT OF CHANGES IN NET ASSETS
FOR THE YEAR ENDED MARCH 31, 1999
(thousands of dollars)

	1999	1998
	Invested in Capital Assets	"Total"
		"Total"
Balance at beginning of year	\$602	\$501
Excess (deficiency) of revenue over expense	-	336
Purchase of capital assets	100	(100)
Disposal of capital assets	(25)	25
Amortization of capital assets	(216)	216
Lease financing	-	-
Lease financing	25	(25)
Repayment of capital lease obligation	61	(61)
Balance at end of year	\$547	\$892

ALBERTA HERITAGE FOUNDATION FOR MEDICAL RESEARCH
CONSOLIDATED STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED MARCH 31, 1999
(thousand of dollars)

	1999	1998
Operating activities:		
Cash received from operations	\$36,278	\$33,039
Cash received from Medical Innovations Program	331	244
Cash received from Health Research Collaboration	2,700	3,200
Cash paid for grants and awards	(36,061)	(31,099)
Cash paid for program operation	(1,288)	(878)
Cash paid for administration	(2,746)	(2,274)
Net cash (used in) generated through operating activities	(786)	2,232
Investing activities:		
Cash paid for purchase of capital assets	(126)	(453)
Proceeds on disposal of capital assets	1	-
Net cash used in investing activities	(125)	(453)
Financing activities:		
Cash paid for capital lease obligation repayments	(61)	(82)
Net cash used in financing activities	(61)	(82)
Net increase (decrease) in cash for the year	(972)	1,697
Cash at beginning of year	10,055	8,358
Cash at end of year	\$9,083	\$10,055
Cash	\$3,434	\$3,843
Restricted cash	5,649	6,212
	\$9,083	\$10,055

ALBERTA HERITAGE FOUNDATION FOR MEDICAL RESEARCH

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

MARCH 31, 1999

Note 1 Authority and Purpose

The Alberta Heritage Foundation for Medical Research (the Foundation) operates under the authority of the Alberta Heritage Foundation for Medical Research Act, Chapter A-26, Revised Statutes of Alberta 1980, as amended.

The Foundation supports and promotes research in Alberta to improve health and thereby the quality of life of Albertans and people throughout the world.

Note 2 Significant Accounting Policies and Reporting Practices

(a) Basis of Presentation

These consolidated financial statements include the accounts of the Alberta Foundation for Health Research, which operates under The Alberta Companies Act and is a registered charitable organization for income tax purposes. The Alberta Foundation for Health Research activities are directed to the support and advancement of the Foundation.

(b) Capital Assets and Amortization

Capital assets are recorded at cost less accumulated amortization. Capital assets, except for leasehold improvements, are amortized on a straight-line basis over their estimated useful lives at the following annual rates:

Furniture	10%
Office equipment	20%
Computer equipment	33%
Computer equipment under capital lease	33%

Leasehold improvements are amortized on a straight-line basis over the term of the lease.

(c) Cash and Restricted Cash

Cash and restricted cash consist of deposits in the Consolidated Cash Investment Trust Fund of the Province of Alberta. The Fund is invested primarily in securities maturing in less than one year which are either issued or guaranteed by the Canadian federal and provincial governments, deposits given by or guaranteed by chartered banks, or short-term investment-grade-quality notes of Canadian corporations. Interest is earned on the daily cash balance at the average rate of earnings of the Fund which varies depending on prevailing market interest rates.

Restricted cash represents unspent contributions that are subject to externally imposed restrictions related to the Medical Innovation Program.

(d) Fair Value of Financial Instruments

Short-term instruments are valued at their carrying amounts included on the consolidated statements of financial position, which are reasonable estimates of fair value due to the relatively short period to maturity of the instruments. This approach applies to cash, restricted cash, accounts receivable, advances, accounts payable and accrued liabilities, accrued retirement allowance, deferred lease inducement and capital lease obligation.

(e) Revenue Recognition

Restricted contributions are recognized as revenue in the year in which the related expenses are incurred. Restricted contributions received for future expenses are deferred until that future period when they are transferred to revenue.

Unrestricted contributions are recognized as revenue in the current period if the amount to be received can be reasonably estimated and collection is reasonably assured. Endowment contributions are recognized as direct increases in net assets.

Restricted investment income is recognized as a revenue in the year in which the related expenses are incurred. Unrestricted investment income is recognized as revenue when earned.

Recoveries on technology commercialization projects are recognized when performance requirements are satisfied, the amount to be received can be reasonably estimated and collection is reasonably assured.

(f) Grants and Awards Expense

Grants and awards approved by the Trustees of the Foundation are recorded as expense when the awardee has been notified of the amount of the award and all terms and conditions of eligibility for payment of the award have been met.

(g) Pension

Pension Expense

Salaries and benefits include employer pension plan contributions made during the year, the amortization of experience gains and losses, and the increase in accrued retirement allowance.

Deferred Pension Costs

Deferred pension costs represent the cumulative difference between the amounts expensed and the funding contributions required under the Foundation's pension plan.

Accrued Retirement Allowance

Accrued retirement allowance consists of the unfunded liability of a retirement allowance for the Foundation's President.

(h) Lease Inducement

The lease inducement, a cash payment received by the Foundation on the lease for office premises, has been deferred and is accounted for as a reduction of office rental expense on a straight-line basis over the term of the lease.

Note 3 Alberta Heritage Foundation for Medical Research Endowment Fund

The Endowment Fund operates pursuant to the Alberta Heritage Foundation for Medical Research Act and consists of an initial endowment of \$300,000,000 from the Alberta Heritage Savings Trust Fund together with cumulative earnings thereon, less cumulative transfers to the Foundation.

Transfers to the Foundation are available at the request of the Trustees of the Foundation provided that such transfers do not result in the net assets of the Endowment Fund, valued at cost, being less than the initial endowment.

At March 31, 1999 the net assets of the Endowment Fund valued at cost were approximately \$887 million (1998 \$805 million) and valued at market were approximately \$973 million (1998 \$975 million).

Note 4**Capital Assets**

	(thousands of dollars)			
	1999		1998	
	Cost	Accumulated Amortization	Net Book Value	Net Book Value
Furniture and Equipment	\$342	\$200	\$142	\$163
Computer Equipment	784	424	360	90
Computer Equipment under Capital Lease	148	118	30	62
Leasehold Improvements	122	69	53	68
Assets Under Construction	1	-	1	354
	<u>\$1,397</u>	<u>\$811</u>	<u>\$586</u>	<u>\$737</u>

Note 5 Pension Plan

The Foundation's pension plan is a defined benefit plan. Benefits are based on years of service and average salary in the final years of employment.

Pension expense includes the amortization of experience gains and losses. These amounts are being amortized on a straight-line basis over periods from 14 to 21 years. The cumulative difference between the amounts expensed and the funding contributions required is shown on the statement of financial position as deferred pension costs of \$73,400 (1998 \$36,600).

The Plan's status as at March 31, 1999 is as follows:

	(thousands of dollars)	
	1999	1998
Assets	\$1,514	\$1,359
Less actuarial value of accrued pension benefits	1,155	1,022
Excess balance	<u>\$359</u>	<u>\$337</u>

The value of accrued pension benefits was determined by an actuarial valuation as at March 31, 1998 extrapolated to March 31, 1999. The actuarial valuation was determined using the projected benefit method prorated on service. Assumptions used in the valuations are based on the Foundation's best estimate of future events. The Plan's future experience will inevitably vary, perhaps significantly, from the assumptions. Any differences between the actuarial assumptions and future experience will emerge as gains or losses in future valuations and will be amortized over the expected average remaining service life of the employee group.

Retirement Allowance

In December 1993, the Board of Trustees approved a retirement allowance package for the President. The unfunded liability at March 31, 1999 of \$183,500 (1998 \$133,500) has been accrued and expensed. This liability was determined by an actuary using the same assumptions that were used to value the pension plan.

Note 6 Capital Lease Obligation

The capital lease on computer equipment bears an interest rate of 5.25% and matures on July 1, 1999. Future repayments which include a provision for a \$25,170 buyout option are as follows:

Year ended March 31, 2000	\$55,401
Total minimum lease payments	55,401
Less imputed interest	(328)
	<u>\$55,073</u>

The capital lease relates to approximately \$297,000 of computer equipment. The Foundation has included \$147,676 of this equipment in capital assets (Note 4). In 1997, the balance was expensed since the equipment was transferred to the regional health authorities and provincial boards as part of the SEARCH program.

Note 7 Deferred Contributions

Deferred contributions represent unspent resources externally restricted under the Medical Innovation Program and the Health Research Collaboration Agreement. Amounts are amortized to revenue to the extent of expenses incurred under these programs during the current period. Changes in the deferred contributions balance are as follows:

	(thousands of dollars)	
	1999	1998
Contributions received during the year:		
Transfers from Alberta Health under the Health Research Collaboration Agreement	\$2,700	\$3,200
Interest	303	244
Recoveries on Technology Commercialization	28	-
	<u>3,031</u>	<u>3,444</u>
Less amounts recognized as revenue in the current year:		
Health Research Collaboration	3,153	2,980
Medical Innovation Program	2,134	1,203
	<u>5,287</u>	<u>4,183</u>
Decrease during the year	(2,256)	(739)
Balance at beginning of year	8,204	8,943
Balance at end of year	<u>\$5,948</u>	<u>\$8,204</u>
The balance is comprised as follows:		
Medical Innovation Program	3,549	5,351
Health Research Collaboration	2,399	2,853
	<u>\$5,948</u>	<u>\$8,204</u>

Note 8 Net Assets

Operations include the biomedical and health programs of the Foundation which are funded from the transfers from the Endowment Fund and available cash balances. The Foundation's policy is to retain funds in the Endowment Fund and transfers are made only on an as needed basis.

Note 9 Other Programs

(a) Alberta Foundation for Health Research

The Alberta Foundation for Health Research, a wholly owned subsidiary of the Foundation, operates under The Alberta Companies Act and is a registered charity for income tax purposes. The Foundation's activities are directed to promote and support medical and health research.

(b) Medical Innovation Program

The Foundation administers funds for the Medical Innovation Program on behalf of the Minister of Economic Development. The Program funds the early stages for commercial development of medical and health related technologies.

(c) Health Research Collaboration

The Foundation and Alberta Health have entered into an agreement to facilitate and enhance health research and health technology assessment and their dissemination in the Province of Alberta.

Note 10 Recoveries on Technology Commercialization

The Foundation has entered into various agreements to fund technology commercialization projects. The projects involved have high scientific merit, but are speculative with both technical and commercial risk. Any recoveries by the Foundation under these agreements will be long term, in some cases at least ten years. In addition to recoveries, some agreements contain a provision for future royalty payments. Amounts ultimately receivable by the Foundation are not determinable at this time and will be recognized as revenue when they are due and collection is reasonably assured.

	1999			1998		
	Salaries ⁽¹⁾	Benefits ⁽²⁾	Total ⁽³⁾	Salaries ⁽¹⁾	Benefits ⁽²⁾	Total ⁽³⁾
Chairman	\$12,281	\$-	\$12,281	\$10,405	\$-	\$10,405
Board of Trustees	78,588	1,098	79,686	73,940	1,007	74,947
President and Chief Executive Officer	188,333	30,705 ⁽⁴⁾	219,038	178,000	28,345	206,343
	<u>\$279,202</u>	<u>\$31,803</u>	<u>\$311,005</u>	<u>\$262,345</u>	<u>\$29,352</u>	<u>\$291,695</u>

- (1) Salaries include regular base pay, overtime, retainers, honoraria, and any other direct cash remuneration.
- (2) Benefits include the Foundation's share of all employee benefits and contributions or payments made on behalf of employees including vacation payouts, pension, health care, dental coverage, out-of-country medical benefits, medical benefits, group life insurance, accidental disability and dismemberment insurance, long and short-term disability plans and professional memberships.
- (3) Salaries and benefits are distributed to various expense categories including committee meetings and fees, salaries and benefits and office administration.
- (4) Contributions for accrued retirement allowance were \$17,400 in 1999 (\$10,000 1998).

Note 12 Commitments

(a) Office Premises

The Foundation has entered into a 65 month lease for office premises. This lease expires on May 31, 2001.

(b) Total commitments pertain to the following fiscal years:

	(thousand of dollars)		
	Grants and Awards	Office Premises	Total
1999-2000	\$26,248	\$48	\$26,296
2000-2001	13,146	57	13,203
2001-2002	8,273	10	8,283
2002-2003	5,464	-	5,464
2003-2004	2,645	-	2,645
	<u>\$55,776</u>	<u>\$115</u>	<u>\$55,891</u>

Note 13 Budget

The budget process involves the determination of the cost for the estimated number of investigators sponsored for Foundation awards and meeting standards of excellence which the Foundation could support within the spending guidelines and program objectives laid out by the Board of Trustees of the Foundation. Variance from budget is determined in a large part by the number and quality of actual applications received and deferred or declined awards.

The 1998-99 budget was approved by the Board of Trustees in March 1998. Following is the consolidated budget:

	Actual	Budget
Revenue	\$41,565	\$40,745
Grants and Awards	(36,922)	(38,415)
Program Operation	(1,288)	(1,934)
Administration	(3,019)	(2,827)
Excess (deficiency) of revenue over expense	\$336	\$(2,431)

Funds are budgeted and transferred from the Endowment Fund on an as needed basis.

Note 14 Uncertainty Due to the Year 2000

The year 2000 issue is the result of some computer systems using two digits rather than four to define the applicable year. Government computer systems that have date sensitive software may recognize a date using "00" as the year 1900 rather than the year 2000, which could result in miscalculations or system failures. In addition, similar problems may arise in some systems if certain dates in 1999 are not recognized as a valid date or are recognized to represent something other than a date. The effects of the year 2000 issue may be experienced before, on, or after January 1, 2000. If not addressed, the effect on operations and financial reporting may range from minor errors to significant systems failure that could affect the ability to conduct some government operations. Despite the government's efforts to address this issue, it is not possible to be certain that all aspects of the year 2000 issue affecting the government, including those related to the efforts of customers, suppliers and other third parties, will be fully resolved.

Note 15 Approval of Financial Statements

These financial statements were reviewed by the Audit Committee and recommended to the Board of Trustees for approval.

ALBERTA FOUNDATION FOR HEALTH RESEARCH

FINANCIAL STATEMENTS

MARCH 31, 1999

Auditor's Report

Statement of Financial Position

Statement of Revenue and Expense

Statement of Changes in Net Assets

Statement of Cash Flows

Notes to the Financial Statements

AUDITOR'S REPORT

To the Trustees of the Alberta Foundation
for Health Research

I have audited the statement of financial position of the Alberta Foundation for Health Research as at March 31, 1999 and the statements of revenue and expense, changes in net assets, and cash flows for the year then ended. These financial statements are the responsibility of the Foundation's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and

disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In my opinion, these financial statements present fairly, in all material respects, the financial position of the Foundation as at March 31, 1999 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles.

Original signed by
Peter Valentine, FCA
Auditor General
Edmonton, Alberta
June 25, 1999

**ALBERTA FOUNDATION FOR HEALTH RESEARCH
STATEMENT OF FINANCIAL POSITION**

March 31, 1999

	1999	1998
ASSETS		
Cash	<u>\$134,312</u>	<u>\$610,582</u>
LIABILITIES AND NET ASSETS		
Net Assets	<u>\$134,312</u>	<u>\$610,582</u>

The accompanying notes are part of these financial statements.

**ALBERTA FOUNDATION FOR HEALTH RESEARCH
STATEMENT OF REVENUE AND EXPENSES**

FOR THE YEAR ENDED MARCH 31, 1999

	1999	1998
Revenue		
Donations	\$-	\$602,329
Interest	<u>31,035</u>	<u>11,395</u>
	31,035	613,724
Expenses		
Grants	500,000	-
Newsletter	2,308	-
Professional Fees	<u>4,997</u>	<u>3,437</u>
	507,305	3,437
Excess (deficiency) of revenue over expense for the year	<u><u>\$(476,270)</u></u>	<u><u>\$610,287</u></u>

**ALBERTA FOUNDATION FOR HEALTH RESEARCH
STATEMENT OF CHANGES IN NET ASSETS**

FOR THE YEAR ENDED MARCH 31, 1999

	Unrestricted	1999	1998
Balance at beginning of year	\$610,582	\$610,582	\$295
Excess (deficiency) of revenue over expense	<u>(476,270)</u>	<u>(476,270)</u>	<u>610,287</u>
Balance at end of year	<u><u>\$134,312</u></u>	<u><u>\$134,312</u></u>	<u><u>\$610,582</u></u>

ALBERTA FOUNDATION FOR HEALTH RESEARCH

NOTES TO THE FINANCIAL STATEMENTS

MARCH 31, 1999

Note 1 Authority and Purpose

The Alberta Foundation for Health Research, a subsidiary of the Alberta Heritage Foundation for Medical Research, operates under The Alberta Companies Act and is a registered charity for income tax purposes. The Foundation was incorporated on November 17, 1994 and commenced operations during 1998. The Foundation's activities are directed to promote and support medical and health research.

Note 2 Significant Accounting Policies and Reporting Practices

(a) Cash

Cash consists of deposits in the Consolidated Cash Investment Trust Fund of the Province of Alberta. The Fund is invested primarily in securities maturing in less than one year which are either issued or guaranteed by the Canadian federal and provincial governments, deposits given by or guaranteed by chartered banks, or short-term investment-grade-quality notes of Canadian corporations. Interest is earned on the daily cash balance at the average rate or earnings of the Fund which varies depending on prevailing market interest rates.

(b) Fair Value of Financial Instruments

Short-term instruments are valued at their carrying amounts included on the consolidated statements of financial position, which are

reasonable estimates of fair value due to the relatively short period to maturity of the instruments. This approach applies to cash and accounts receivable.

(c) Revenue Recognition

Restricted contributions are recognized as revenue in the year in which the related expenses are incurred. Restricted contributions received for future expenses are deferred until that future period when they are transferred to revenue.

Unrestricted contributions are recognized as revenue in the current period if the amount to be received can be reasonably estimated and collection is reasonably assured. Endowment contributions are recognized as direct increases in net assets.

Restricted investment income is recognized as revenue in the year in which the related expenses are incurred. Unrestricted investment income is recognized as revenue when earned.

Note 3 Budget

As the Foundation commenced operations in 1998 and has had limited activity, a budget was not prepared for 1998-99. In future, the Board will determine an appropriate budgeting process, given that donations are unpredictable and operating expenses are minimal.

Note 4 Uncertainty Due to the Year 2000

The year 2000 issue is the result of some computer systems using two digits rather than four to define the applicable year. Government computer systems that have date sensitive software may recognize a date using "00" as the year 1900 rather than

the year 2000, which could result in miscalculations or system failures. In addition, similar problems may arise in some systems if certain dates in 1999 are not recognized as a valid date or are recognized to represent something other than a date. The effects of the year 2000 issue may be experienced before, on, or after January 1, 2000. If not addressed, the effect on operations and financial reporting may range from minor errors to significant systems failure that could affect the ability to conduct some government operations.

Despite the government's efforts to address this issue, it is not possible to be certain that all aspects of the year 2000 issue affecting the government, including those related to the efforts of customers, suppliers and other third parties, will be fully resolved.

Note 5 Approval of Financial Statements

These financial statements were reviewed and approved by the Board of Directors.

ALBERTA OIL SANDS TECHNOLOGY AND RESEARCH AUTHORITY

OIL SANDS TECHNOLOGY AND RESEARCH FUND FINANCIAL STATEMENTS

MARCH 31, 1999

Auditor's Report

Statement of Operations

Statement of Changes in Financial Position

Statement of Financial Position

Notes to the Financial Statements

AUDITOR'S REPORT

To the Members of the Alberta Oil Sands Technology and Research Authority

I have audited the statement of financial position of the Alberta Oil Sands Technology and Research Authority - Oil Sands Technology and Research Fund as at March 31, 1999 and the statements of operations and changes in financial position for the year then ended. These financial statements are the responsibility of the Authority's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

The Oil Sands Technology and Research Fund is required to follow the corporate government policies and reporting practices, as disclosed in Notes 3 and 5. These accounting policies have been established by Alberta Treasury and are consistent across government entities.

With certain exceptions, the basis of accounting is in accordance with generally accepted accounting principles. My reservation of opinion in this auditor's report identifies an exception from generally accepted accounting principles that arises from following the accounting policies established by Alberta Treasury.

The following accounting policies are exceptions from generally accepted accounting principles:

Excluded direct costs

Salaries, accommodation, and certain other administrative costs incurred in the operation of the Oil Sands Technology and Research Fund have not been included in expenses. The departments that paid these expenses on behalf of the Fund record these costs which approximate \$1,360,000 for the year.

In my opinion, except for the effect of the matters discussed in the preceding section, these financial statements present fairly, in all material respects, the financial position of the Fund as at March 31, 1999 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles.

Original signed by
Peter Valentine, FCA
Auditor General
Edmonton, Alberta
May 21, 1999

Alberta Oil Sands Technology and Research Authority
Oil Sands Technology and Research Fund
Statement of Operations
For the year ended March 31, 1999
(In thousands)

	1999		1998
	Budget	Actual	Actual
Revenue:			
Contribution from Department of Energy	\$8,200	\$8,200	\$8,200
Production revenue and recoveries	500	776	1,086
Sale of technology	500	102	1,167
	9,200	9,078	10,453
Expenditure:			
Oil sands mining and extraction	4,500	8,250	390
In situ oil sands and heavy oil	5,640	3,343	1,455
University programs	1,000	1,184	960
Conventional oil, enhanced oil recovery and natural gas	1,800	1,090	824
Bitumen and heavy oil upgrading	1,500	939	521
Technology management	850	378	500
Transportation and marketing	100	(3)	76
Energy-related environmental technologies	1,000	-	28
	16,390	15,181	4,754
Net operating results from continuing operations	(7,190)	(6,103)	5,699
Net operating results from discontinued operations (Note 7)	-	(98)	(3,062)
Net operating results	\$(7,190)	\$(6,201)	\$2,637

The accompanying notes are part of these financial statements.

Alberta Oil Sands Technology and Research Authority
Oil Sands Technology and Research Fund
Statement of Changes in Financial Position
For the year ended March 31, 1999
(In thousands)

	1999	1998
Operating transactions:		
Net operating results from continuing operations	\$(6,103)	\$5,699
Non-cash items included in net operating results		
Provision for future project abandonment	1,568	(72)
Decrease (increase) in accounts receivable	(10)	953
Increase in accounts payable and accrued liabilities	330	346
	(4,215)	6,926
Discontinued operations (Note 7)	(98)	(1,621)
Net cash provided by (used in) operating transactions	(4,313)	5,305
Financing activity:		
Discontinued operations (Note 7)	-	2,743
Cash provided by financing activity	-	2,743
Investing activity:		
Discontinued operations (Note 7)	-	959
Cash provided by investing activity	-	959
Net cash provided (used)	(4,313)	9,007
Cash at beginning of year	26,637	17,630
Cash at end of year	\$22,324	\$26,637

The accompanying notes are part of these financial statements.

Alberta Oil Sands Technology and Research Authority

Oil Sands Technology and Research Fund

Statement of Financial Position

As at March 31, 1999

(In thousands)

	1999	1998
Assets:		
Cash (Note 4)	\$22,324	\$26,637
Accounts receivable	477	467
	<u>22,801</u>	<u>27,104</u>
Liabilities:		
Accounts payable	775	1,355
Holdbacks payable	1,183	273
Accumulated provision for future project abandonment (Note 6)	<u>2,629</u>	<u>1,061</u>
	<u>4,587</u>	<u>2,689</u>
Net assets	<u>\$18,214</u>	<u>\$24,415</u>
Net assets at beginning of year	\$24,415	\$21,778
Net operating results	(6,201)	2,637
Net assets at end of year	<u>\$18,214</u>	<u>\$24,415</u>

The accompanying notes are a part of these financial statements.

ALBERTA OIL SANDS TECHNOLOGY AND RESEARCH AUTHORITY

OIL SANDS TECHNOLOGY AND RESEARCH FUND

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED MARCH 31, 1999

Note 1 Authority

The Alberta Oil Sands Technology and Research Authority (the Authority) operates under the authority of the Oil Sands Technology and Research Authority Act (the Act), Chapter 0-6, Revised Statutes of Alberta 1980.

Note 2 Purpose

The Act created a corporation, the Alberta Oil Sands Technology and Research Authority, which consists of not less than three and not more than nine board members appointed by the Lieutenant Governor. The Authority assists in the development of new technology for recovery and processing of petroleum from Alberta oil sands deposits and heavy crude reserves, and enhanced recovery of oil from conventional petroleum reservoirs.

Note 3 Summary of Significant Accounting Policies and Reporting Practices

These financial statements are prepared in accordance with the following accounting policies that have been established by government for all departments, including the Authority. The recommendations of the Public Sector Accounting Board of the Canadian Institute of Chartered Accountants are the primary source for the disclosed basis of accounting. Recommendations of the Accounting Standards Board of the Canadian Institute of Chartered Accountants, other authoritative pronouncements, accounting literature and published financial statements relating to either the public

sector or analogous situations in the private sector are used to supplement the recommendations of the Public Sector Accounting Board where it is considered appropriate.

(a) Reporting entity

The reporting entity is the Alberta Oil Sands Technology and Research Authority - Oil Sands Technology and Research Fund, which is part of the Ministry of Science, Research and Information Technology and for which the Minister responsible for Science, Research and Information Technology is accountable. Other entities reporting to the Minister are the Alberta Research Council, the Alberta Science and Research Authority and the Science and Research Fund. The activities of these three organizations are not included in these financial statements.

Since significant financial transactions of the Ministry are reported outside the Fund's financial statements, the Ministry consolidated financial statements provide a more comprehensive accounting of the financial position and results of the Ministry's operations. The Ministry Annual Report provides a more complete picture of the responsibilities for which the Minister is accountable.

(b) Basis of financial reporting

Capital Assets -

Development costs for facilities and equipment are capitalized when the technical feasibility of technology is established and when estimated future revenue exceeds estimated future expenditure.

Note 4 Cash

Cash and short-term investments consist of deposits in the Consolidated Cash Investment Trust Fund (the "Fund") of the Province of Alberta. Treasury is managing the Fund with the objective of providing competitive interest income to depositors while maintaining maximum security and liquidity of depositors' capital. The portfolio is comprised of high quality short-term and mid-term fixed income securities with a maximum term to maturity of five years. Due to the short-term nature of the Fund's investments the carrying value approximates fair value.

Interest earned on cash balances, in the amount of \$1,241,000 (March 31, 1998 - \$708,000) is credited to general revenues of the Province of Alberta and is therefore not reflected in these statements.

Note 5 Related Party Transactions

Expenses in the amount of \$1,360,000 (March 31, 1998 - \$1,223,000) for salaries, accommodation and certain other administration costs incurred in the operation of the Authority have not been included in the fund expenditures. These costs are incurred and recorded by the Government of Alberta Departments of Energy, and Public Works, Supplies and Services, and the Alberta Science and Research Authority.

The Authority has an agreement with Alberta Research Council (the Council) to jointly manage and conduct research programs together with industry participants. During 1998/99 the Authority has contributed \$1,040,000 (March 31, 1998 - \$1,040,000) to the Council. This was the Authority's share of the expenditures of the research programs. As part of this agreement the Authority will collect and remit to the Council the industry participants' share of the research programs expenses. In 1998/99 the Authority collected \$975,000 (1997/98 - \$900,000) on behalf of the Council. This amount is not recorded on the financial statements of the Authority.

Note 6 Accumulated Provision for Future Project Abandonment

Under joint participation agreements, the Authority will incur certain costs when wells and experimental projects are abandoned. Management's estimate of future abandonment costs for the following projects are:

	(In thousands)	
	1999	1998
Amoco Block 1	\$ 1,612	\$ -
UMATAC Project (ATP)	500	500
Amoco GLISP	411	440
Unocal Buffalo Creek	45	60
Husky Kearle Lake Project	35	35
Norcen Bodo	20	20
Others	6	6
Total	\$ 2,629	\$ 1,061

Note 7 Discontinued Operations

Until September 30, 1997 the Authority owned the technology and assets of the UTF. The UTF is an experimental bitumen production facility to test Steam Assisted Gravity Drainage Technology. The bitumen produced from the UTF is sold on a competitive basis. At September 30, 1997 the net book value of the assets amounted to \$7,040,510 and a provision for future UTF abandonment costs amounted to \$3,000,000.

Phase B-2 of the UTF required industry participants to make contributions to the Authority totaling the lesser of \$10,500,000 or 75% of the net expenses for Phase B-2. In exchange the industry participants would receive the rights to the technology developed and 75% of the assets of the UTF. On September 30, 1997 the Authority transferred to the participants the rights to the technology and 75% of the assets of the UTF.

On September 30, 1997 the Authority sold the remaining 25% interest of the UTF for \$4,100,000 and was released from the future UTF abandonment costs estimated to be \$3,000,000.

On October 1, 1997 the Authority no longer held any assets or liabilities related to the UTF.

Note 8 Commitments

The Authority has commitments as at March 31, 1999 totaling \$10,569,000 (March 31, 1998 - \$5,486,000) for approved projects.

Note 9 Contingent Asset

There is a dispute between the Authority and the former operator of the UTF with respect to the accounting for bitumen sales, and the responsibility for the net cost overrun, which occurred under the operator agreement.

In the opinion of management the chances of these matters being resolved in the Authority's favor are not currently determinable.

Note 10 Budget

The budget was included in the Province of Alberta 1998-99 Government Estimates. A more detailed budget, which was prepared by management, has been included in these financial statements for comparison to actual figures.

Note 11 Uncertainty Due to the Year 2000

The year 2000 issue is the result of some computer programs being written using two digits rather than four to define the applicable year. The Authority's computer programs that have date sensitive software may recognize a date using "00" as the year

1900 rather than the year 2000, which could result in miscalculations or system failures. In addition, similar problems may arise in some systems if certain dates in 1999 are not recognized as a valid date or are recognized to represent something other than a date. The effects of the year 2000 issue may be experienced before, on, or after January 1, 2000. If not addressed, the effect on operations and financial reporting may range from minor errors to significant systems failure that could affect the ability to conduct some Authority operations. Despite the Authority's efforts to address this issue it is not possible to be certain that all aspects of the year 2000 issue affecting the Authority, including those related to the efforts of customers, suppliers and other third parties will be fully resolved.

Note 12 Approval of Financial Statements

The financial statements were approved by the Board of the Alberta Oil Sands Technology and Research Authority.

ENTITIES INCLUDED IN THE CONSOLIDATED GOVERNMENT REPORTING ENTITY

Ministry, Department, Fund or Agency

Agriculture Financial Services Corporation
 Alberta Agricultural Research Institute
 Alberta Alcohol and Drug Abuse Commission
 Alberta Dairy Control Board
 Alberta Energy and Utilities Board
 Alberta Foundation for the Arts
 Alberta Gaming and Liquor Commission
 Alberta Government Telephones
 Commission, The
 Alberta Heritage Foundation for Medical
 Research Endowment Fund
 Alberta Heritage Savings Trust Fund
 Alberta Heritage Scholarship Fund
 Alberta Historical Resources Foundation, The
 Alberta Insurance Council
 Alberta Motion Picture
 Development Corporation
 Alberta Municipal Financing Corporation
 Alberta Oil Sands Technology
 and Research Authority
 Alberta Opportunity Company
 Alberta Pensions Administration Corporation
 Alberta Petroleum Marketing Commission
 Alberta Research Council
 Technology
 Alberta Risk Management Fund
 Alberta School Foundation Fund
 Alberta Science and Research Authority
 Technology
 Alberta Securities Commission
 Alberta Social Housing Corporation
 Alberta Special Waste Management Corporation
 Alberta Sport, Recreation, Parks
 and Wildlife Foundation
 Alberta Treasury Branches
 ATB Investment Services Inc.
 Calgary Rocky View Child and
 Family Services Authority
 Chembiomed Ltd.
 Credit Union Deposit Guarantee Corporation
 Crop Reinsurance Fund of Alberta
 Department of Agriculture,
 Food and Rural Development
 Department of Community Development
 Department of Economic Development

Ministry Annual Report

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 Agriculture, Food and Rural Development
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 Economic Development
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 Science, Research and Information
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 Municipal Affairs
 Environmental Protection
 Community Development
 Treasury
 Treasury
 Family and Social Services
 Treasury
 Treasury
 Agriculture, Food and Rural Development
 Agriculture, Food and Rural Development
 Community Development
 Economic Development

Department of Education	Education
Department of Energy	Energy
Department of Environmental Protection	Environmental Protection
Department of Family and Social Services	Family and Social Services
Department of Justice	Justice
Department of Municipal Affairs	Municipal Affairs
Department of Public Works, Supply and Services	Public Works, Supply and Services
Department of Treasury	Treasury
Edmonton Community Board for Persons with Developmental Disabilities	Family and Social Services
Education Revolving Fund	Education
Environmental Protection and Enhancement Fund	Environmental Protection
Gainers Inc.	Treasury
Gas Alberta Operating Fund	Energy
Government House Foundation, The	Community Development
Historic Resources Fund	Community Development
Human Rights, Citizenship and Multiculturalism Education Fund	Community Development
Lottery Fund	Economic Development
Michener Centre Facility Board, The	Family and Social Services
Ministry of Advanced Education and Career Development _	Advanced Education and Career Development
Ministry of Agriculture, Food and Rural Development	Agriculture, Food and Rural Development
Ministry of Community Development	Community Development
Ministry of Economic Development	Economic Development
Ministry of Education	Education
Ministry of Energy	Energy
Ministry of Environmental Protection	Environmental Protection
Ministry of Executive Council _	Executive Council
Ministry of Family and Social Services	Family and Social Services
Ministry of Health _	Health
Ministry of Intergovernmental and Aboriginal Affairs _	Intergovernmental and Aboriginal Affairs
Ministry of Justice	Justice
Ministry of Labour _	Labour
Ministry of Municipal Affairs	Municipal Affairs
Ministry of Public Works, Supply and Services	Public Works, Supply and Services
Ministry of Science, Research and Information Technology	Science, Research and Information Technology
Ministry of Transportation and Utilities ¹	Transportation and Utilities
Ministry of Treasury	Treasury
N.A. Properties (1994) Ltd.	Treasury
Natural Resources Conservation Board	Environmental Protection
Persons with Developmental Disabilities Calgary Region Community Board	Family and Social Services
Persons with Developmental Disabilities Central Alberta Community Board	Family and Social Services
Persons with Developmental Disabilities Foundation	Family and Social Services
Persons with Developmental Disabilities Northeast Alberta Community Board	Family and Social Services
Persons with Developmental Disabilities Northwest Alberta Community Board	Family and Social Services
Persons with Developmental Disabilities Provincial Board	Family and Social Services

_ Ministry includes only the department so separate department financial statements are not necessary.

Persons with Developmental Disabilities
South Alberta Community Board
Public Works, Supply and
Services Revolving Fund
S C Financial Ltd.
Science and Research Fund

Utility Companies Income Tax Rebates Fund
Victims of Crime Fund
Wild Rose Foundation, The

Family and Social Services

Public Works, Supply and Services

Treasury
Science, Research and Information
Technology
Treasury
Justice
Community Development

ENTITIES NOT INCLUDED IN THE CONSOLIDATED GOVERNMENT REPORTING ENTITY

Fund or Agency

Alberta Cancer Board
 Alberta Heritage Foundation for
 for Medical Research
 Alberta Mental Health Board
 Alberta Teachers' Retirement Fund Board
 Improvement Districts Trust Account
 Local Authorities Pension Plan
 Long-Term Disability Income
 Continuance Plan -Bargaining Unit
 Long-Term Disability Income
 Continuance Plan -Management,
 Opted Out and Excluded
 Management Employees Pension Plan
 Provincial Judges and Masters in
 Chambers Pension Plan
 Public Post Secondary Institutions
 Development
 Public Service Management
 (Closed Membership) Pension Plan
 Public Service Pension Plan
 Regional Health Authorities
 School Boards
 771045 Alberta Ltd. operating as Travel Alberta
 Special Areas Trust Account
 Special Forces Pension Plan
 Universities Academic Pension Plan
 Workers' Compensation Board

Ministry Annual Report

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